President's Message

Hello all! Hopefully this letter finds you all well. This year is moving right along and several events are approaching very quickly. Next month will be the Grubstake Days Parade (Saturday, May 23rd). This is an event where ARES and MARC are able to show the community what we can do. Come out and see the parade and your fellow hams in action. There will also be a booth set up after the parade. If you are at the parade, stop by the booth and say hello. If you want to participate in the parade or working the booth for a couple of hours in the afternoon, please contact Manuel-AE6SG, John-AG6QM, or Dennis-KG6PAH.

Right after Grubstakes Day Parade, we will roll right into Field Day (June 27-28). There is quite a bit of planning that is happening in an effort to make this event as smooth as possible. There are lots of good ideas out there. Bring your input to the planning sessions. The next session is April 12 at the Yucca Mesa Improvement Association Community Center. Field Day is always a fun time for all, whether you are making contacts, or building antennas, or just socializing. At the next regular meeting there will be signup sheets for time slots that you want to operate. There will be equipment available for you to operate on. There will also be time slots available if you would prefer to operate your own rig. Voice, CW, Digital, VHF, Satellite and more are all options that are available to participate in.

Also, on October 16-17 will be the annual Boy Scout Jamboree-On-The-Air (JOTA). This is an event where Boy Scout Troops and Girl Scout Troops all over the World are on the air making radio contacts radio. Several members of our club have supported this event in years past. I don't see JOTA as a time to recruit young new hams, but as a chance to share my hobby with a younger generation. Later in that Scout's life, when they have time and money, they can make the effort to become a ham,—But they will always remember that time that when they talked to another Scout who was 'all the way in Kansas'. For more information, visit: http://www.scouting.org/jota.aspx

Last, membership dues are coming up for some. If you can, please keep member dues up to date. I look forward to seeing you all in April.

73s, Jeffrey Hardy, KJ6BOI

Nets

Amateur Radio Emergency Service (ARES), Monday @ 1915
Morongo Basin Amateur Radio Club (MARC), Tuesday @ 1900

Club Meeting

Every 3rd Thursday of the month at 7 PM.
St. Christopher of the Desert Catholic Church
61261 Sunburst Dr., Joshua Tree, CA

Directions: Traveling on highway 62, turn south on Sunnyhill Road in Joshua Tree. Go ½ mile and turn east (left) on Sunburst Drive. The Church is located at the end of the block.

Linked Repeaters

Yucca Valley, W6BA
146.790 MHz (- shift = 146.190 MHz)
136.5 Hz PL/CTCSS

Twentynine Palms, W6IF
147.060 MHz (+ shift = 147.660 MHz)
136.5 Hz PL/CTCSS

Landers, WB6CDF
447.580 Mhz (- shift = 442.580 MHz)
173.8 Hz PL/CTCSS

Field Day Preparations

Pictures from Field Day Committee Meeting, 15 March 2015. The next meeting is 6PM Sun 12 April at the YMIA Community Center, 3133 Balsa Ave. Field Day is 27-28 June 2015.

Chris, Nick, and Jeffrey

Larry and Steve

Beacon

First of all, what is a beacon in the first place? It is a guy transmitting 24 hours a day, 7days a week without taking any vacations or days off. He / she would be transmitting with same power level with same message all of the time.

Some time ago, people got tired of trying to hire somebody that did not have to take a 'kidney break' to fulfill his / her 24 hour shift. Thus they hired a miniature elf inside Radio Frequency (RF) enclosures. And when they got tired of paying even the small annual pittance, they got the robotics involved. The robot would press the Morse code key exactly at the precise time and sequence, only requiring an occasional squirt of oil here and there.

Today, we hire a dedicated PROM (Programmable Read Only Memory) chip to do the bidding. The job of this chip is to turn on and off an RF oscillator that feeds an amplifier. This signal is then fed to an antenna and radiated out into the 'ether'.

The reasons for the beacon's existence are many. One obvious reason is direction finding. The location of the beacon does not change, thus it is an ideal source of location. When one knows the location of the beacon, one can always home into it. Another is to study the ionosphere / atmospheric effects on the signals by remote stations. Another is to see / check one's antenna performance. If one is building a new antenna, one can 'tune up' the antenna very easily as there is a steady signal coming from one direction constantly. Recheck your antenna's performance after a 'bird strike', excessive wind, freezing weather, rain, your rotator's accuracy etc…

The simplest type of beacon would be an oscillator turned on and off with a PROM chip to do an identification and data. But this requires either a CW or SSB (Single Side Band) receiver to detect. This type is used mostly on Very Low Frequency and Short wave frequencies. These are very hard to detect with an FM (Frequency Modulated) receiver. A FM modulated audio signal would be great for FM receivers. The CW, AM, or SSB receivers would basically only receive a carrier tone. Note that even these mode receivers would benefit from this type of continuous and steady modulation.

My proposal for the club's beacon. Let us as a club project, build a keyer for the audio modulator, which will be driving a 5 watt donated walkie-talkie fed into a 'J-Pole' antenna at some location. A solar power charger to a battery would self- power the whole system. This FM beacon would be on two meter band. If at a later time a 440 beacon is wanted, all we would additionally need is the 440 FM transmitter and a "J-Pole" antenna for 440. Also if need arises, the 1.2 GHz could be added with the same modulator. And can you imagine a project of a beacon for EME (Earth Moon Earth)? Of course this is an extremely fanciful proposition, but NOT impossible. Just some food for thought. So I propose that we start with a 2 meter beacon with an audio modulated FM, that would say "W6BA beacon" and then have at least a 3 second (preferably 5 second) audio tone. This way the FM receiver's analog meters can get an accurate signal level. And if you record the signal, it gives an accurate reference level.

Matti B. Aro, WA6YKU

Arduino
By Steve Morse

I went to the 2015 March meeting of the MARC this evening. Rob Cloutier gave a talk on Arduinos, which are small microcomputers, and some of the neat circuits he has built. After the meeting, Rob and I, and several other members got to talking about these wonderful little pieces of equipment, and what they can do.

One of the topics discussed was were to buy parts, boards, and other 'stuff', so I mentioned to Rob, and all assembled that I would put a list of suppliers up on my web site.

These links can be accessed by going to my web site at **http://www.ki6hgh.com** and then clicking on the '**Arduino Links**' link on the main page or on the index on the left hand side.

I have dealt with every one of the suppliers listed on my website and they are the best I have found. Each has their strengths and weakness, I am not going to say which ones are better or worse, but I will deal with every one listed again. Your miles may vary as we say!

Also there are several makers of boards. I have, and have used the following boards: Arduino UNO, MEGA, the TI Launch Pad, and PCDuino, Parallax Basic Stamp, and the Parallax Propeller. I have made some boards myself, mainly Arduino based, and some add on boards and shields. I may, if there is sufficient interest write a short article on each one.

If you need any help, parts, or just want to chat, about these wonderful little boards, you can call me on (805) 881-3055, or email, morsed2@gmail.com. I love meeting at a coffee shop, hint, hint!

Steve Morse, KI6HGH
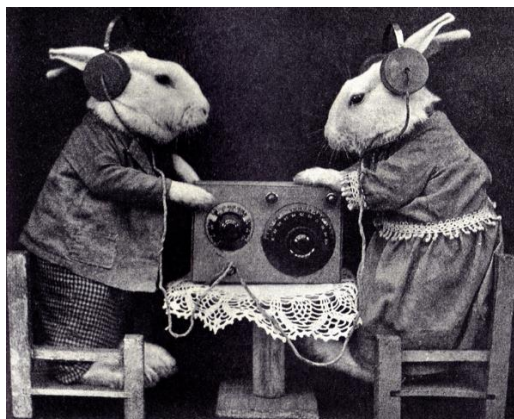
PSK-31 Digital Mode

PSK-31 is a common and simple digital mode that can be used to have keyboard-to-keyboard communications between hams over VHF and HF bands. This is much like a chat conversation between two users and can transmit about 35 words per minute. This mode requires a simple computer with appropriate software, an external sound card, and a radio with appropriate cables to connect to the sound card. (If you are proficient with VOX and your internal sound card-you can get by with just a radio and a computer.)

One of the challenges in today's PSK-31 and other digital modes is getting your radio to Push-To-Talk (PTT) due to the proliferation of the USB port and the demise of the 9-pin/RS-232 serial port. USB driven external sound cards built for this purpose are an easy solution to this problem. Two such external sound cards are the SIGNALINK (http://www.tigertronics.com/slusbmain.htm) and the RIGBLASTER (http://www.westmountainradio.com/product_info.php?products_id=rigblaster_plus2).

Your computer will need appropriate software to display the incoming text and allow you to type the text that will be transmitted to a distant station. There are lots of software downloads available. If you want one of the simplest versions, you may choose DIGIPAN (http://www.digipan.net/). A more up to date and robust (and a little more complicated) program is FLDIGI (http://w1hkj.com/download.html). One of the most capable programs is Ham Radio Deluxe (http://www.ham-radio-deluxe.com/). The first two programs are free whereas the last is not. You may find that you get what you pay for. These are just a few of the very many different ways to get on the air with PSK-31.

A short Google search will get your radio cables properly connected. A couple of YouTube videos will teach you the details of PSK-31 (https://www.youtube.com/watch?v=jQpBGh9RMEQ) and you can be on the air with a simple digital mode.

Jeffrey Hardy, KJ6BOI

April 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	1	2	3	4
			April Fool's Day	**ARES Meeting 7:00 pm** Good Shepherd Lutheran Church Yucca Valley		
5	6	7	8	9	10	11
Happy Easter	ARES Net 7:15pm	MARC Net 7:00 pm				
12	13	14	15	16	17	18
Field Day Meeting 6:00 pm YMIA Community Center 3133 Balsa Avenue	ARES Net 7:15pm	MARC Net 7:00 pm		**MARC Meeting 7:00 pm** St. Christopher's Catholic Church Joshua Tree		
19	20	21	22	23	24	25
	ARES Net 7:15pm	MARC Net 7:00 pm				
26	27	28	29	30	1	2
	ARES Net 7:15pm	MARC Net 7:00 pm				