



## RACES – Mountain District – Mile High Radio Club

PO Box 1204

Idyllwild, CA 92549-1204

E-mail: [mhrc@arrl.net](mailto:mhrc@arrl.net)

[www.milehighradioclub.org](http://www.milehighradioclub.org)

Repeater Station WA6SSS 146.895 (-) pl 118.8



**Officers** - President: Bill Tell KD6KTV, Vice President: Wayne Laube KJ6HYC, Membership: Rick Foster KG6TIJ  
Secretary: Marilyn Peck KJ6IPT, Treasurer: Chris Johnson K6IDY  
**Board Members:** BJ Brix KJ6IPX, Tom Pierce K8EBR, Tom Unwin WA6SSS  
**RACES Emergency Coordinator:** Bill Baker KN6JV

# MOUNTAIN FLASHES – NEWSLETTER

## JUNE - 2012

### In this Issue:

*Presidents Message / March Club Minutes*

### County wide Monthly Roll Call

#### First Monday of the Month

*Will be on June 11th, Roll call normally starts around 1845 and ends when a stand-down order is issued.*

**All Mountain Roll Calls are conducted on the Idyllwild Repeater 146.895 (-) 118.8**

### June - Wednesday Roll Call

#### is held at 1900 Hours

**This month's callers are;**

6<sup>th</sup> : Bill KN6JV                      13<sup>th</sup>: Kathy KA6MOM  
16<sup>th</sup> : Tom WA6SSS                27<sup>th</sup> : Open

**June Meeting @ Idyllwild Fire Department – Training Room  
Mark Your Calendars!**

**MHRC / RACES: Thursday 14<sup>th</sup>**  
General Meeting at 6:30 PM

Everyone is welcome to attend any of the above meetings or call in on the nets.

### Presidents Message

June 2012 – Message

Both April and May have proven to be busy times for the Club and RACES communications. Many of us attended the Fireman's Muster put on by the Fire Safe Council of Idyllwild. The club set up a booth and met with many members of the community. We showed off our portable repeater and power supply and answered up a number of questions.

The most recent event we supported was the Idyllwild Cycling Spring Challenge mountain bike race on May 5<sup>th</sup>. We combined forces with MDP and MCP to staff course check points and radio communication relays back to race command. Paul Miglin (communications chair) along with Dan Messina set up the very cool communications trailer at the base camp. From base Paul, Nancy Layton (of MDP), Don Ortel and Tom Rockland were all on hand to take the calls from the field posts. In total we had 15 plus operators, hats off to everyone for a job well done.



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Next up is Field Day on the weekend of June 23<sup>rd</sup> and 24<sup>th</sup>. We will be setting up on Highway 243 next to the tree carver on K6GUN's property. We will again be looking for a strong turnout. Plan to BBQ for dinner with a pot luck and would like to host many members from the community to show off our capabilities throughout the weekend. Both Paul Miglin and I will co-chair this event. So if you have any ideas or areas that you would like to support, let us know your thoughts.

Wayne Laube our Vice President provided an excellent overview on handheld radios during our May meeting. He went into great detail on various types of batteries, radios and antenna selection. The club was engaged with questions for Wayne, as many of us use the handheld type radios. It was a great presentation and we look forward to more programs through Al Toering over the next several months. Stay tuned as to their schedules and topics.

We have also been putting a lot of effort in getting our records up to date with regards to RACES. Harold Witten Deputy East Director for RACES was in attendance for our May meeting. Harold was able to address a number of questions we had from our membership. The regulations that the County OES is passing down, have long been over due. In order for RACES to continue and to interact with the served agencies we support, we will need to comply or become in-active. The common feeling is that we must continue with RACES and support our local community with the quality service they have come to expect of us. This is an exciting time and we hope to grow our role and membership in RACES. Tentatively we have scheduled Anthony Richardson to appear at our June 14<sup>th</sup> meeting. If all goes according to plan we will be swearing in those individuals signing up and continuing on with RACES. Over the next week or so we hope to wrap up on these details. Separate notices will be forwarded via e-mail on this subject.

On the TASMA front, we have submitted all documents for delegate membership, club call sign assignment for our repeater and the interference issues we have experienced. They were to have a technical meeting on May 26<sup>th</sup> however it was just canceled due to lack of quorum. I have been able to discuss our issues with their Technical Chair a couple of times. It sounds like they have looked into or conducted a few tests. No details to report as of yet, was hoping to have attended their May meeting, but will need to wait till it gets re-scheduled. We will continue to provide further updates as they become available.

Bill Tell  
KD6KTV

### **Radio Club Minutes for General Meeting May 10, 2012**

#### **MHRC Board / General Meeting May 10, 2012**

##### **CALL TO ORDER:**

The Mile High Radio Club general meeting was called to order by President Bill Tell at 1817 hours with 18 members present, thereby constituting a quorum. The Pledge of Allegiance was led by Rick Foster.

Previous minutes (April Meeting) were published in the March newsletter. Marilyn Peck called for any corrections or additions to the minutes as published in the newsletter, hearing none, Rick Foster then moved to accept the minutes as published, seconded by Al Toering. There being no further discussion, the vote was taken approving the minutes unanimously.

##### **TREASURER'S REPORT:**

The Treasurers report was read by Chris Johnson. Paul Miglin moved that it be accepted as read and Bill Baker seconded. Motion passed.

Bill Tell presented two bills totaling \$44.72 to reimburse himself for printed matter. Chris Johnson mentioned that if your dues are outstanding, please



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pay through the club as that will give the club a rebate for collecting them.

## MEMBERSHIP REPORT:

Rick Foster stated that we have an application for membership from KJ6UYV, Brian Guillot. Kathy Hamilton moved to accept Brian as a new member; Chris Johnson seconded the motion. The vote was taken and Brian Guillot was unanimously accept into membership.

## CORRESPONDENCE:

None presented.

## NEW BUSINESS:

Astro Camp: Bill Tell announced that Milly wants to promote Ham Radio ad Astro Camp. They would like a Ham demo to the Camp. Bill asked for volunteers to do this to promote amateur radio. Chris, Jim, Jerry and Kathy volunteered. Date of the presentation is unknown at this time.

Field Day: Field day will be on June 23<sup>rd</sup> and 24<sup>th</sup>. If you would like to help please contact Bill Tell or Paul Miglin. Rick will need \$130 for a Handicap Port-a potty at this event. Bill stated that it will be expenses at \$120 for the Field Day.

Visalia Convention: Chris Johnson attended the convention and reports that it was well attended. They held a DX University which was a whole day course on DX'g.

ADJOURNMENT: Don Hamilton moved and Kathy Hamilton seconded to adjourn the meeting, vote in favor was unanimous. Meeting was adjourned at 19:27pm.

Prepared and submitted by:

Marilyn Peck KJ6IPT,  
Secretary



At last months Meeting of the Mile High Radio Club, someone asked about the life expectancy of SMA connectors. It's a good question but there is a lot of misinformation out there.

Many new HT's use an SMA connector for the Antenna. It's a small semi-precision connector rated for general use from DC to 18 GHz

The word on the street is this connector has a very low maximum number of mating cycles before you'll start to have problems. This could be a concern for folks like me who can't afford to replace my HT every couple of years just because I like to hook it up to an external antenna when I get home from work.

Even Wikipedia says this:

**“SMA connectors are rated for 500 mating cycles, but to achieve this it is necessary to properly torque the connector when making the connection.”**

Sounds ominous huh?

Manufacturers commonly list specifications like this:

Connector durability	500 mating and unmating cycles @ 12 cycles per min.
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They do this to show they meet Government standards for this product. The Government requires this particular style of connector to show absolutely

## **The Truth about SMA connectors**



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no degradation in performance for up to 500 properly conducted mating cycles. After that, the manufacturer doesn't guarantee *squat*.

On Brass instead of Stainless Steel connectors, I've seen the spec as low as 100 mating cycles.

So how many times can you disconnect and reconnect the HT's Antenna?

In 1970 there was a study performed by some smart guys with a lot of equipment named Dietrich Bergfried and Helmut Fischer. They published their results with IEEE in an article named

"Insertion-Loss Repeatability versus Life of Some Coaxial Connectors"

Here's the abstract:

**Variation of insertion loss with connect-disconnect cycles was measured for mated pairs of the following types of connectors: GPC-14 [3], GPC-7 [3], type N, and SMA. Two versions of each of the type N and SMA connectors were tested versus life at intervals of 2500 connect-disconnect cycles over a total of 10 000 operations. Measurements were made with a resolution of 0.0001 dB between 2 and 18 GHz. The variations expressed in the standard deviation ranged for new connectors from +<0.002 dB on the best to a maximum of 0.008 dB and increased as much as three times after 10 000 connections. Some causes of the increase are considered for the different connectors.**

So, 10,000 mating cycles from 2 to 18 Ghz and the deviation was up to plus or minus 0.024 dB.

But we don't operate our little handhelds at those frequencies do we? Well I guess neither did Mr. P. Paikay in 1977, because he ran the whole test over again but from 100 MHz to 12 GHz. And his deviation numbers came out 2 to 3 times lower than the boys in '70. so what's that? back down to around 0.008dB.

What happened? Manufacturers get better at making SMA's? Maybe. Less error at the lower frequencies? Probably.

ok, let's put this in perspective. 10,000 mating cycles. If you connected and disconnected your little rubber duck antenna twice a day, you'd hit 10,000 mating cycles in a little over 13.6 years. 0.008dB insertion loss. These error's might be too big to be acceptable on the internal connections of a microwave signal generator, but on our little bitty 5 watt max handhelds I'll bet you won't notice a thing.

So after 500 connections, the performance may degrade up to .008dB over the course of the next 9500 connections? I'll take that. Heck, triple the error just in case I got my facts wrong, and your 5 watt radio is still pumping out 4.972445 Watts

Now that's not to say SMA's are bullet proof. You can kill them quick by over tightening them. 5 inch-pounds torque is what they like and that ain't much. But if you're careful with them, they should at least last the life of the rest of your radio.

Chris Fourroux  
N1OUT

Wikipedia. SMA connector. Retrieved 5-16-12

From  
[http://en.wikipedia.org/wiki/SMA\\_connector](http://en.wikipedia.org/wiki/SMA_connector)

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<http://www.amphenolrf.com/products/sma.asp?N=0&sid=4FB2EE005E26E17F&>

Bergfried, Dietrich and Fischer, Helmut  
Insertion-Loss Repeatability  
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<http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=4313926&url=http%3A%2F%2Fieeexplore.ieee.org%2Fiel5%2F19%2F4313896%2F04313926.pdf%3Farnumber%3D4313926>

- A**-14005 kHz
- B**-14105 kHz
- C**-14305 kHz
- D**-14405 kHz

Paikay, P.

Analysis of insertion loss repeatability of coaxial connectors. Retrieved 5-16-12 From

<http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=5269073&url=http%3A%2F%2Fieeexplore.ieee.org%2Fiel5%2F5266378%2F5269023%2F05269073.pdf%3Farnumber%3D5269073>

With which of the following conditions must a beacon stations comply? (G1B02)

- A**-A beacon station may not use automatic control.
- B**-The frequency must be coordinated with the National Beacon Organization.
- C**-The frequency must be posted on the Internet or published in the national periodical.
- D**-There must be no more than one beacon signal in the same band from a single location.

### Editor Notes:

Here are some test questions to test your mind

What precaution should you take whenever you make adjustments or repairs to an antenna? (G0A12)

- A**-Ensure that you and the antenna structure are grounded.
- B**-Turn off the transmitter and disconnect the feed line.
- C**-Wear a radiation badge.
- D**-All of these choices are correct.

What is the maximum symbol rate permitted for RTTY or data emission transmitted at frequencies below 28 MHz? (G1C08)

- A**-56 kilobaud.
- B**-19.6 kilobaud.
- C**-1200 baud.
- D**-300 baud.

Which wire or wires in a four-conductor line cord should be attached to fuses or circuit breakers in a device operated from a 240-VAC single-phase source? (G0B01)

- A**-Only the hot wires.
- B**-Only the neutral wire.
- C**-only the ground wire.
- D**-All wires.

Paul Miglin  
KG6TIL

Which of the following frequencies is within the General Class portion of the 20 meter phone band? (G1A08)