



VOLUME 57 ISSUE 12

December 2007

## HOME BUILT VARIAC ENCLOSURE

John Evans NØHJ



**I** bought a barely used Variac (autotransformer is the proper term since Variac is a registered trademark) at an estate sale a while ago for a very low price, along with a ton of old parts and electronics gear. The old

equipment, and getting much of it at bargain prices (bare autotransformers can typically go for \$70-\$200 new), made me nostalgic for building and restoring vacuum tubes and equipment as well as keeping a lot of old but useful electronic parts out of the landfill. I decided I needed to house the autotransformer in a case along with an AC voltmeter to monitor the output since the autotransformer didn't have a range scale with it, and an AC ammeter to monitor the current draw of the device under test.

I hope this project will enlighten some about the gear and perhaps spur further interest in building, restoring or putting old tube gear back in service. If you want to build one of these devices, please keep in mind that working with line voltage and autotransformers can expose you to lethal voltages and currents. If you aren't comfortable working with high voltages, enlist the help of an Elmer who is knowledgeable. Double-check all wiring to make sure it matches the schematic and immediately disconnect power if it seems like it isn't acting correctly.

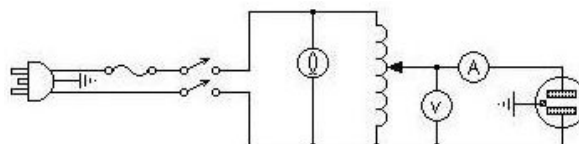
Autotransformers are very useful for restoring old tube gear as it allows you to slowly bring up the line voltage over several hours in an attempt to "wake up" old electrolytic capacitors in the device. It also monitors the amount of current into the device in case there are any shorts or failed components that could do

further damage. Autotransformers are also useful for testing unknown power transformers to see if they are still usable and to determine which windings are which.

### What is an autotransformer?

If you look at the schematic, you'll see that an autotransformer is nothing but a large coil with a variable tap or wiper. When the line voltage (120 VAC) is applied across all the windings of the autotransformer, the wiper can actually sample part of this voltage anywhere from zero volts all the way up to the voltage across the entire coil. This permits initial application of low voltage to an old rig and then slowly brings up the voltage to maximum over time. If you've ever seen and/or purchased an old piece of tube gear at a hamfest and the power cord was cut off, don't be dismayed; the previous owner did you a favor by preventing you from blindly plugging the rig in and doing damage to components that have been sitting around unused for 20 years. That is a signal that the rig should be brought slowly back to life.

Not all autotransformers are the same and I've simplified the schematic diagram somewhat to make my explanation simpler. Some autotransformers actually have two extra connections that permit the line voltage input to be connected across some but not all of the coil windings. In other words, it permits the wiper to go beyond the VAC input and provide more than 120 VAC to the output and to the device under test.



*Cont'd...*

### Home Built Variac Cont'd...

In our simplified autotransformer circuit, however, I have the circuit shown as only providing the line voltage to the output. From the three-pronged power plug shown, I connected the ground connection to the outlet on the top of my box and to the metal panel. Both the hot and neutral sides of the line are connected to a DPST (double pole single throw) switch before going to the input side of the autotransformer. The hot side, however, is fused first to provide overload protection. There is also a 120 VAC lamp connected across the switch to show when power is applied to the box.



On the output side of the autotransformer, the wiper connects through an AC ammeter to the hot side of the power outlet. An AC voltmeter connects across the output side to both the hot and neutral connections. As the dial is adjusted, the output voltage will vary and be displayed on the voltmeter. As

the voltage is increased, the current through the device may increase which will register a current draw indication on the ammeter. Therefore, we have a variable AC voltage at the power outlet with meters to monitor both voltage across and current into the device.

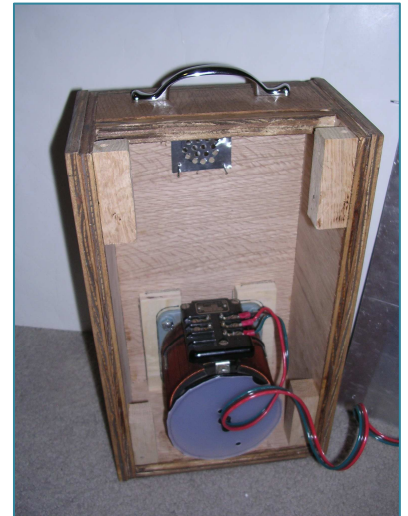
I constructed a wooden box to hold the autotransformer, as it a heavy device weighing 10-15 pounds. The box provides a very sturdy case and the autotransformer is mounted to the box securely with bolts and nylon lock nuts. The two meters, power lamp, power switch, outlet, and power cord all mount to the L-shaped aluminum panel. A three-conductor cord connects the autotransformer in the wooden box to the connections on the panel.



The most difficult steps of construction were 1) getting the autotransformer mounted so the wiper disk was neither too close to the metal panel—it is connected to the wiper—nor too far away—the knob needs some length of shaft to mount to—and 2) to cut the holes for the rectangular switch, outlet and round meter movements. Judicious drilling and use of a nibbling tool made that go smoothly.

When in use, the only real stress that the panel gets is flipping the on/off switch, plugging in, and unplugging the power cord from the device under test. Four screws hold the panel to the wooden box.

Screened vent holes in the rear of the box provide ventilation for the autotransformer. A handle on top makes the whole assembly easier to carry and four nylon furniture feet help prevent scratching whatever surface it sits on. All wiring is done internally using crimp on connectors, with the exception of wires to the fuse holder, which are soldered.



I deliberately did not put values on the fuse and meters in the schematic as your device may be different from mine. My autotransformer is rated at 17 Amps and the ammeter full-scale deflection is 5 Amps. I doubt I will test a piece of ham equipment that draws more power than this. A 5-Amp fuse would be appropriate in this case. My power switch is rated much higher as are all the wiring and connections.

I've saved a ton of money on my car insurance, er, Variac project, and now have a useful piece of test equipment to help restore those old tube rigs I have piling up in the basement. Time to restore that old tube tester sitting on my basement floor.

*Enjoy es 73  
John Evans NØHJ*

## In Other Words...

With a new board in place, the past few weeks have been busy and full of interesting developments, some of which will be unveiled at the annual Christmas party on December 12<sup>th</sup> at the Golden Corral at Woodmen and Powers from 6-9 p.m. Please make sure to tell the cashier you are with the PPRAA and they will help you find the banquet room.

A different place is the least of the changes expected at the Christmas party and if you aren't there, you won't know what you missed until it's too late. I have it on good authority that prizes include four Wal-Mart gift certificates (\$100, \$50 and two for \$25), door prizes and gift certificates to Outback Steakhouse, Texas Roadhouse and Famous Dave's. There are two very big prizes but they have already been awarded.

Two members were chosen to receive the PPRAA Lifetime Achievement award for outstanding service, but like the Oscars, you'll have to wait to find out who they are. The Lifetime Achievement awards will be given annually from now on and I have to tell you choosing one person from a long list of candidates is difficult, but only two could win. When you get right down to it, the men and women who have given selflessly of their time, talents, experience and expertise over the years deserve to be honored.

So many members do so much that it is nearly impossible to single out one or two members without making someone feel they were passed over. That is not the case. Every one of the members who have taken a seat on the board, Elmered new and potential amateur radio operators, taught the theories and practices necessary to responsible radio operation, held and office, created and the Zero Beat, coordinated community activities, Field Day, the annual picnic and Christmas party, maintained the financial, membership and historical files, showed up for VE sessions and filed the paperwork and even those who have been faithful members through the good times and bad deserve to be honored but there is only so much that can be done in a few weeks' time. Suffice it to say, without you the PPRAA would have ceased to exist a long time ago and for that, we all owe you a debt of gratitude and out thanks.

As for me, I thank all those people who have graciously endured my whining, begging and complaining in order to get enough content to fill this newsletter for the past two years. Without you, my job would have been easier, but it would also have been much less interesting. I'm sure you know you can count on me to continue to harass you for more articles and pictures. If you can tell me about it, you can write it down for me.

Last month, I made some major changes to the Zero Beat. One change is in the amount of content available only in the E-mail and PDF version of the newsletter available for download at [PPRAA.org](http://PPRAA.org). Since I am limited to twelve pages in the print edition, I could not run much of what I wanted to use. That has changed.

I hope you caught Steve Williams KØSRW's article on creating websites with Joomla!, which is a free program designed to make your websites look professional even if you don't know HTML or how to code a website with the new databases. This month Steve continues to guide you through some of the features that will make your website eye-catching and versatile.

I would also like to welcome two new columnists, Les Borst KCØNC and Dave Sloane NØEOP. Les has been membership chairman for many years and this month's column was written by his wife, Jody, who became a silent key nearly a year ago. Les will continue the column with historical tidbits about the PPRAA. Dave will tell you everything you wanted to know about contesting but didn't know who to ask.

Steve Galchutt NØTU took his new home brewed ATS-III back packing with his goats and even offers a label design so you don't forget what buttons turn on the pocket-sized rig but you'll find more pictures and the PowerPoint design only on the PPRAA website.

As the year ends, one thing should be at the top of everyone's list: renewing their PPRAA membership. You don't want to miss out on what's in store next year, benefits that you'll miss if you forget to renew your membership or forget to sign up.

I'm looking forward to the coming year. In the meantime, I'll see you at the Christmas party. I'll be the one taking pictures and checking out which door prizes will fit in my bag.

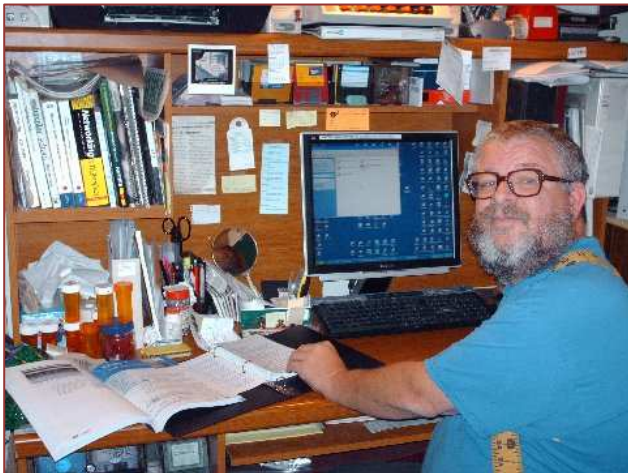
Happy holidays.

**Jackie Cornwell ACØCA**  
*Editor*



## DITS & BITS

- ✚ The Club Library is available to all members. At this time, I have a request for an article from QEX magazine published in 1999. We also need a shelf unit and small desk. If anyone would like to donate their QEX magazines, other electronics books or magazines please contact Ken Sheehan at (719) 382-4126 or [kd0agv@earthlink.net](mailto:kd0agv@earthlink.net) to arrange for pick-up or delivery.
- ✚ Mike Anderson, WV7T, PPRAA Technical Education Coordinator, stops for a brief moment while deep into research developing new study material for General Class students. Mike hopes to have the Power Point ready after the first of the year.



## WAY BACK MACHINE PIKES PEAK AMATEUR RADIO ASSOC.

Organized amateur radio in the Pikes Peak region dates back to the early 1930s. The first radio club was the Pikes Peak Amateur Radio Association and recorded holding meetings at the YMCA building. The club used the call of W9OKY when Colorado was part of the ninth district. Club activities involved

general long distant communications, public service events and Field Day

When the U.S. entered World War II in 1941, the U.S. government halted all amateur radio activities. With no more amateur radio activity allowed, the club disbanded and all property and club funds were divided among the members.

On November 8, 1950, after the war was over and things returned to normal, local amateur radio operators formed the El Paso Radio Club holding meetings the first year at the YMCA. Meetings the following year were held at the Naval Reserve building at Prospect Lake.

In February 1959, the name of the club changed to The Pikes Peak Radio Amateur Association (PPRAA) and meetings were held in the Red Cross Building. In May 1969, the call of WAØVTU was issued and is still used.

The PPRAA continues the activities started by the original club: the Pikes Peak Auto Hill Climb and Field Day. To these, new amateur-related activities have been added. These include providing public service communications local events like marathons, walks, Balloon Classic, severe weather nets, Spring Spree, the Black Forest outhouse race and the Olympic Festival Torch run and trials.

In addition, the PPRAA sponsored the Amateur Radio Emergency Services (ARES), provided radio communications to the National weather service, installed antennas on all Colorado Springs hospitals, conducted amateur radio classes and added Volunteer Exam sessions.

The club also sponsors social activities: an annual picnic, hidden transmitter hunts, a variety of educational programs at the club meetings, monthly activities, a Christmas party and the annual swap fest held in Monument, Colorado.

Over the years, the PPRAA has received local, state and national awards for services to the community and received the ARRL public service award in November 1977. The PPRAA is an American Radio Relay League affiliate and charter member of the Colorado Council of Amateur Radio Clubs and continues to produce the award-winning Zero Beat monthly newsletter, started in 1960 to provide the region with a center-point for amateur radio interest.

The PPRAA holds monthly meetings the second Wednesday night of each month for all interested amateurs.

*Jody Borst KAØROZ*

## On the Goat Trail QRP Afield

I walked past the goat pen where my pack goats lazed around getting fat and decided it was time to hit the trail again. As the battery charged, I surfed the Web and reread [Steve Yakes AA5TB's](#) article on end fed halfwave (EFHW) antennas because I wanted to try his 0.05 wavelength counterpoise to add to my cobbled together EFHW-ATU. I had pretty good luck with it before and thought the EFHW could improve performance a little more; it did. That is, it did based on the number of contacts I made before the battery crashed.



**20m End Fed Halfwave tuner**

The weather man forecasted sunshine and temps in the 60s, so I loaded the boys into the truck and sped off to the trailhead. After a few rest stops to catch our breath, we soon arrived at our favorite overlook on Mt. Herman. I launched a wire into a Ponderosa pine and watched it sail off into space; I forgot to anchor the other end. Luckily, the feed end was stuck about thirteen feet up the tree. Unluckily, I couldn't find anything to retrieve the loose end, so I climbed up the tree while the boys watched, reminding myself to tie up loose ends.

Back on the ground, I turned on the radio. I was surprised how quiet the band was. There was virtually no QRN. Between fence chargers and all the other manmade electrical noise at home, it's a real pleasure to connect the antenna and hear the real noise floor. It's one of the many reason I love going portable and operating in the woods.

When I built my first crystal set as a kid, I was amazed how radio signals could come from such a small device. Now it's possible to have a complete multi-band ham radio station that fits on my lap much less in my pocket is astonishing. How cool is that?



**ATS3A with new label, lithpoly battery, ear bud and micro TENEKE paddle ready to rock!**

I finally added a label that reminds what button does what. (This old goat needs all the help he can get.) I forget which button does what between hikes and the brain fade- proof label does the trick. I made it in PowerPoint, printed it several times to get the sizing right and then had it laminated for two dollars at the UPS store. I made the holes to match the buttons with a hole punch then used spray adhesive to mount it on the tin. But enough about my rig.

Once I connected to the antenna I heard K4AXF's signal thumping the ear bud as it lay on the rock and I was in business.

### Log:

- K4AXF Jim/VA rig/K2-4W ant/GP
- KB3MEM Dave/PA Rig? ...deep QSB
- JA1??? heard him calling CQ thought he signed/QRP?? -wow!
- N9OHW Mike KX1-4W wire in tree! asked if I could QSY to 40m ...Fun QSO!
- AB3GYW Frank/MD 5W dipole

Not bad for bottom of the solar cycle, huh?

*Cont'd...*



On the Goat Trail cont'd...



**A 4-band ham radio station with manual logging software that fits on my lap.**

The only local QRM was goat made. My goats got restless as I was logging the Qs and started their usual antics. They wait until I'm in the middle of a QSO then nibble on my collar while I'm trying to send, or they chew on my pack while I'm logging or sending and unable to throw something at them. All in all, it was a super day spent hiking and hamming while my goats kept me smiling.



**My pack goat Rooster looks for trouble in the old goat's daypack!**

*Steve Galchutt NØTU*

[ATS-3a label PDF](#)  
[More pictures](#)

## CONTESTING TIPS & TRICKS

This is the first of many monthly columns to come about contesting. Each month's column depends on what you want to see and learn. I will list major contests and give you tips on how to increase your scores and what software logging programs are available (especially FREE ones). Please send your comment, suggestions and questions to me and I'll address them here. What I don't already know I'll find out.

What is contesting? Contesting allows a ham to see how well his station compares to other stations, how good an operator you are, how well you plan your time and band usage, and how many hours you can operate and stay effective. In other words, it's a matter of cramming as much fun as you can (or your XYL will allow) into a short time.

### Upcoming contests:

- ❖ **ARRL 10-Meter Contest** 0000Z – 2400Z, Dec 9, 2007
- ❖ **OK DX RTTY Contest** -- sponsored by the Czech Radio Club, 0000Z-2400Z Dec 15.
- ❖ **North American Meteor Scatter Contest** -- sponsored by the WSJTGROU from 0000Z Dec 13 to 0700Z Dec 17 during the Geminids meteor shower.
- ❖ **ARRL Straight Key Night** -- from 0000Z-2359Z Jan 1, 2008.
- ❖ **Worked All Britain Christmas Party** -- CW/SSB/Digital, from 0000Z Dec 26-2359 Jan 6, 2008.
- ❖ **Colorado QSO Party** 1000Z Sep 20 – 0400Z Sep 21, 2008

73,

*Dave NØEOP*  
[desloan@aol.com](mailto:desloan@aol.com)

## PPRAA BOARD MEETING MINUTES

November 19, 2007



**Attendees:** Mike WV7T, Doug N7LEM, Dan ACØCC, Dennis NØABC, Mike KØMLA, Sue KØSYA, Rob N7LV, and John KCØJFH.

President Doug Nielsen  
N7LEM called the meeting to

order at 7 PM at the Stetson Hills Police Substation.

The board meeting minutes were approved was corrected from what was printed in the Zero Beat. The correction was the board minutes were labeled as club minutes and vice versa.

### Reports

**Treasurer's Report** – Dennis NØABC reported that we have at total of \$10734.05 in our three accounts as of Nov 19, 2007.

### Unfinished Business

✚ **Christmas Party** will be held Wednesday, Dec 12, 6-9 PM, at the Golden Corral near Woodmen & Powers (NW corner). Sue KCØSYA is ready to go on this. Plenty of door prizes will be given.

✚ **2008 General Membership Meetings Location**

✚ Doug N7LEM has reserved a room at the East Library Information Center (ELIC) for the first four months of 2008. Other options include staying put in EPCHD Auditorium. Sue KCØSYA/Mike WV7T moved/seconded to move the meetings from January through April to the ELIC location. Passed. The room may be reserved six months ahead of time, so we will need to renew the reservation every six months.

✚ **BYLAWS:** The need to change the Bylaws to eliminate the meeting time clause was discussed but must be put before the membership. Check the Bylaws for exact wording. (*Secretary's note: the 2nd Wed. club meeting time requirement was removed from the Bylaws in 2001. The meeting time requirement for the "annual meeting" for election of officers still exists in the Bylaws. Per the Bylaws, this remains on the 2nd Wed. of October.*)

✚ **Volunteer Recognition:** We need to determine the level or category of awards for individual contributions and develop guidelines for future awards. Nominations will be solicited from board members. Dan will procure plaques and other awards. Dan/Mike KØMLA moved/seconded we spend up to \$499 to procure the awards to be given at the Christmas party.

✚ **Phone Notification/Announcements:** The initial trial of the automated phone call system was successful and can be used for meeting location or time changes or cancellation. Doug will notify Joe NØEKR to set this up to announce the Christmas party.

### New Business:

#### Programs

- ❖ Dec 12 – Christmas party
- ❖ Jan – Homebrew Night
- ❖ Feb – Utility Safety (tentative)
- ❖ Time TBD - Winter Safety by Search and Rescue – tentative

➤ **Zero Beat Editor:** Rob N7LV provided a written status report from Jackie ACØCA. After some discussion, the board unanimously agreed that they are very happy with Jackie's work on the Zero Beat and encourage her to continue as editor. We also agreed that the proposed changes mentioned in the status report should be implemented. One of the changes: the electronic version would be different (more content) from the printed version. If corrections were needed after publication, these would be made to the electronic version only.

➤ **Equipment Donation by WAØWRL:** The proposed donation includes the following equipment: Collins KWM-2 transceiver Drake W4 wattmeter, Johnson Matchbox, Collins speaker, Heathkit Q-multiplier, mike, and other items. We would be willing to accept this donation and provide a letter itemizing the various pieces of equipment.

➤ **DXpedition Support Requests (HQ8R Swan Island, 5T):** No thanks on these two requests.

➤ **Asset Manager/Storage:** Mike WV7T is unable to continue to store assets due to lack of space. We would like to have all this stuff in one

*Cont'd...*

**Board meeting minutes Cont'd...**

place. Options discussed included storage space rental, a trailer, a storage shed and soliciting storage space from club members.

- **Committee Chairs review/membership:**  
HamCon chairman – not Jerry VerDuft any more. Steve is still our liaison for the next HamCon.
- **New Historian is Les Borst**
- **Membership Benefits:** Mike WV7T provided suggestions for revising and improving our paid membership benefits. Suggestions included a members-only section of our website, discounts on Hamfest admissions, restrictions on Zero Beat distribution, etc. Discussion will be continued at our next board meeting in December.
- **Special Event Stations:** Tabled until next meeting. Please consider possible events or topics we could use for a station.
- **Chairmen/Cancellation Dates:**
  - ❖ **Megafest** – Tentative date is June 14 (2nd Sat). Rob Roller N7LV has graciously volunteered for this post. John KCØJFH needs to contact school to secure the date.
  - ❖ **Colorado QSO Party** – Chairperson is still needed. Drop-dead date is 3-17-08.
  - ❖ **Field Day** – Chairperson still needed. Drop-dead date is 3-17-08. March board meeting is 17th.

**Around the Table**

- ✚ **Dennis NØABC** – is it OK to get a plastic file and a storage box? Up to \$60; Dan/Mike WV7T moved seconded. He would like to get someone to take over as VE Testing liaison. Can we raise the Hamfest table price to \$20/\$15 for non-members/members?
- ✚ **Dan ACØCC** - will be available for consultation on treasurer items. He needs to receive nominations for the recognition awards by this weekend.
- ✚ **Mike WV7T** - needs to get plaques for the contest award activity. Mike KØMLA/Dan moved to write a check for \$50 to obtain these two plaques.
- ✚ **Doug N7LEM** – what can we do to improve membership numbers? Our focus this year is increasing our membership and improving club member benefits.

The meeting was adjourned at 9 PM. Next PPRAA Board meeting: 7 PM, Monday, Dec 17, 2007, at the Stetson Hills Police Substation.

*Submitted by:*  
**John Wishart KCØJFH**  
**PPRAA Secretary**  
**18 October 2007**

**NONPROFIT STATUS**

The PPRAA is a federal 501(c)(3) nonprofit organization, and welcomes all contributions. Your contributions or donations may be tax-deductible.

**AMATEUR RADIO LICENSE EXAMINATIONS**

The PPRAA/VE team holds testing sessions at 9 AM at the Colorado Technical University, 4435 North Chestnut (just west of I-25 and just south of Garden of the Gods Rd).

**Exam fee:** \$14.00 for Elements 2, 3, and/or 4, payable to ARRL/VEC.  
No same-day retakes of same element. Walk-ins allowed; pre-registration not necessary.

**BRING:** Photo ID, original and copy of valid ham license and/or valid CSCE, and FRN for licensed hams.

**Contact:**  
Dennis Major NØABC at 719-531-6774 or [email](mailto:dennis@ppraa.org)  
**Online:** [ppraa.org](http://ppraa.org) or [arrrl.org](http://arrrl.org).

**Mark your calendars:**

**Dec. 8**



**PPRAA CLUB MEETING MINUTES**  
**November 14, 2007**

President Doug Nielsen N7LEM called the meeting to order at 7 PM in the El Paso County Health Department Auditorium, followed by introductions around the room.

**Silent Keys:** Gregory Keith NØLLG

Minutes were approved as printed in the Zero Beat.

**Treasurer's Report:** Dennis NØABC reported that we had a \$10734.05 total balance in our three accounts as of 14 Nov 2007.

### **Committee Reports**

**CCARC** – report provided by Dan KBØPPM and given by Doug N7LEM.

Assigned 2-meter repeater frequency pairs in Colorado are very full. The organization is trying to determine if some unused repeater frequencies can be gotten back from their assigned persons and reassigned. They also discussed a revised UHF/VHF frequency use plan for Colorado. An excellent presentation on D-STAR Digital Voice for VHF/UHF was given by Bob Witte NØNR (read article at [www.k0nr.com](http://www.k0nr.com)). See [www.ccarc.net](http://www.ccarc.net) for further info.

**Tech Education – Mike WV7T:** ARRL has given permission to use their training information as a PowerPoint presentation for the General class training on a limited-distribution basis. Mike showed us the plaques to be presented to the Monument/Tri-Lakes area fire department for allowing us to use the fire station grounds and conference area for our Field Day activities.

### **Unfinished Business**

**Megafest** – Chairperson still needed. Contact an officer or board member if interested. The tentative date is Saturday, June 14, 2008 (possible backup of June 7).

**Field Day** – Chairperson still needed. Contact an officer or board member if interested. Field Day weekend is June 28-29, 2008.

**Program:** Jim ABØUK and Mike WV7T gave a great slide presentation on HF Digital Communications, primarily PSK31 and RTTY.

**Next Club Meeting:** Christmas Party, 6-9 PM, December 12, at the Golden Corral at Woodmen and Powers (NW corner).

**Note:** January club meeting is at 7PM, Wednesday, January 9, 2008, at a NEW LOCATION: the East Library Information Center on 5550 North Union Blvd. in Colorado Springs., just south of Vickers on Union. The location has ample lighted parking and improved handicapped access. The meeting rooms are to the left of the entrance.

**Next Board Meeting:** 7 PM, Monday, December 17, at the Stetson Hills Police Substation, 4110 Tutt Blvd.

The meeting was adjourned at 9PM.

*Submitted by:  
John Wishart KCØJFH  
PPRAA Secretary  
18 October 2007*

### **Jess Miley KØTAA**

719 W. 7<sup>th</sup>, Florence, CO 81226  
Amateur & Hobby Radio Products.  
We Trade.

Excellent Tech @ \$35 per hour  
Commercial rates higher / 719-784-3040  
***Please call before you drive.***

## PRESIDENT'S CORNER



*S*easons Greetings PPRAA,

Colder temperatures and dormant gardens make a good excuse to stay inside and get back into the hobby of ham radio. As winter sets in, the days get shorter and the nights get longer, and that means better propagation. The propagation charts for December show that the MUF will get near or above 10 meters late in the morning, local time, especially if you're trying to reach south or west. If you're like me and have to work during the day, then your best chances of catching some DX are in the evening on 80 meters, and maybe 40 meters. Those of you who want to make contact with Europe will have to get up early in the morning to catch those short openings on 20 meters.

We're still near the bottom of the current sunspot cycle, which doesn't help with getting much DX. The last few weeks have shown some, though minimal, sunspot activity. So there is some hope that we might start climbing out of the bottom of this cycle. Things should get better over the next couple of years.

The board of directors is hard at work looking for ways to improve the club for current members and increase membership with inactive or new hams. The volunteer recognition program is coming together and contributions to the club will be recognized at the Christmas Party on December 12<sup>th</sup>. We are also reviewing what you get for your membership and how to increase the value of being a member. Look for some changes in the coming year. We're taking a close look at the meeting programs and plan to bring in outside speakers to cover current popular topics in ham

radio and providing materials for hands-on sessions where the members build a project, like a J-pole antenna, etc. Of course, we're always open to ideas from the members to improve the club. If you have any, please contact a board member.

The first major change you should notice in 2008 is a change in location for the general membership meetings. Starting with the January 9<sup>th</sup> meeting, monthly meetings will be held at the Colorado Springs East Library, 5550 N Union Blvd. That's about six miles north of where we used to meet on S. Union; meeting time is still 1900 hours.

Remember that the club Christmas Party is 12 December at 1800 hours at the Golden Corral near Powers and Woodmen. I hope to see you there.

Wishing you all the best of this holiday season,

73,

**Douglas Nielsen, N7LEM**  
**PPRAA President**

## Ø-BEAT DEADLINE

Deadline for the January 2008 issue is December 17, 2007. Submit your jokes, articles, news items, ads, comments, suggestions, letters to the editor or questions for columnists by E-mail, U. S. Mail, telephone or in person. We need your fresh content.

**CONTACT:** Jackie Cornwell ACØCA

**PH:** 719-632-8254

**E-mail:** [zerobeat@ppraa.org](mailto:zerobeat@ppraa.org)

**USPS:** 2406 W. Kiowa St. #1

Colorado Springs, CO 80904

## Creating Great Web sites with Joomla! Part 2



This is the second in a short series of articles on developing professional-looking Ham Radio websites (or any kind of website) with free and powerful Joomla Content Management System (CMS).

CMS systems generally allow the development of complex sites without the need to master all the nits of programming navigation bars, adding pictures, making buttons work, linking pages, connecting to databases, uploading and downloading files, blogging, etc.

Part One of this article is available for download at [PPRAA](#). You'll find a working example of a simple Joomla web site at [KOSRW](#).

By following the steps laid out in Part One you should now have a skeleton website. If encountered issues and messages that not fully covered in the earlier article, Google (I guess that's a verb as well as a noun these days) helped you quickly find answers.

Once you got your site up and running, I hope you pressed ahead and added content to your website. By now, you've already figured out a lot about the Joomla Site Administrator functions. This article will give you a good feel for what you can do through the rich and easy-to-use Site Administrator functions.

One reader asked for more information about the additional software packages required on the system hosting your website. Before talking about the Site Administrator functions, I'll answer his questions. I briefly mentioned MySQL, Apache and PHP in Part One at the beginning of **Web Hosting**.

### **Why is MySQL Database needed?**

Content Management Systems such as Joomla make use of an underlying database to store content, navigation, visual layout and site configuration information. When users change content in a CMS system, they don't usually upload a batch of new files to their web hosting system. Instead, they use the CMS administration functions to change database entries to reflect the new content. Except for the database itself, CMS system files are fairly static.



Non-CMS development tools, Microsoft FrontPage for example, help users create HTML (Hypertext Markup Language) files that imbed the user's desired content and look-and-feel within. When users change content with a program like FrontPage, files containing the new and revised content must be uploaded by FTP to their web hosting system. Joomla uses a free, open source package known as **MySQL Database** for content management purposes. To use Joomla, MySQL must already be present on the web hosting system. Generally speaking, web hosting systems don't allow users to install this type of "system" software themselves, but many hosting companies already run MySQL, but if your web hosting company doesn't, they might be talked into installing it for you.

Fortunately, Joomla protects you from having to know all the intricacies of MySQL since Joomla handles all that behind the scenes. However, if you'd like to learn more, you will find answers at [MySQL](#).

### **Why is the PHP Hypertext Preprocessor needed?**

PHP is a free, open source, widely used scripting language designed especially for web development; it's a server-side scripting language used in conjunction with HTML to provide essentially any web content you want to use. With PHP, content can be dynamic, respond easily to user inputs, access databases from within web pages, etc. With PHP, web programmers aren't limited to the restricted capabilities of HTML, but can do almost anything full programming languages allow.

If you want to see what happens, take a look at Joomla files ending in the PHP extension and you'll see HTML and scripting content. If you ever decide to change how Joomla works, you'll have to learn to use PHP and HTML. Thankfully, Joomla makes it possible to create incredible websites with no knowledge of PHP. If you'd like to learn more about PHP though, spend some time at [PHP.net](#).

### **Why is the Apache Web Server needed?**

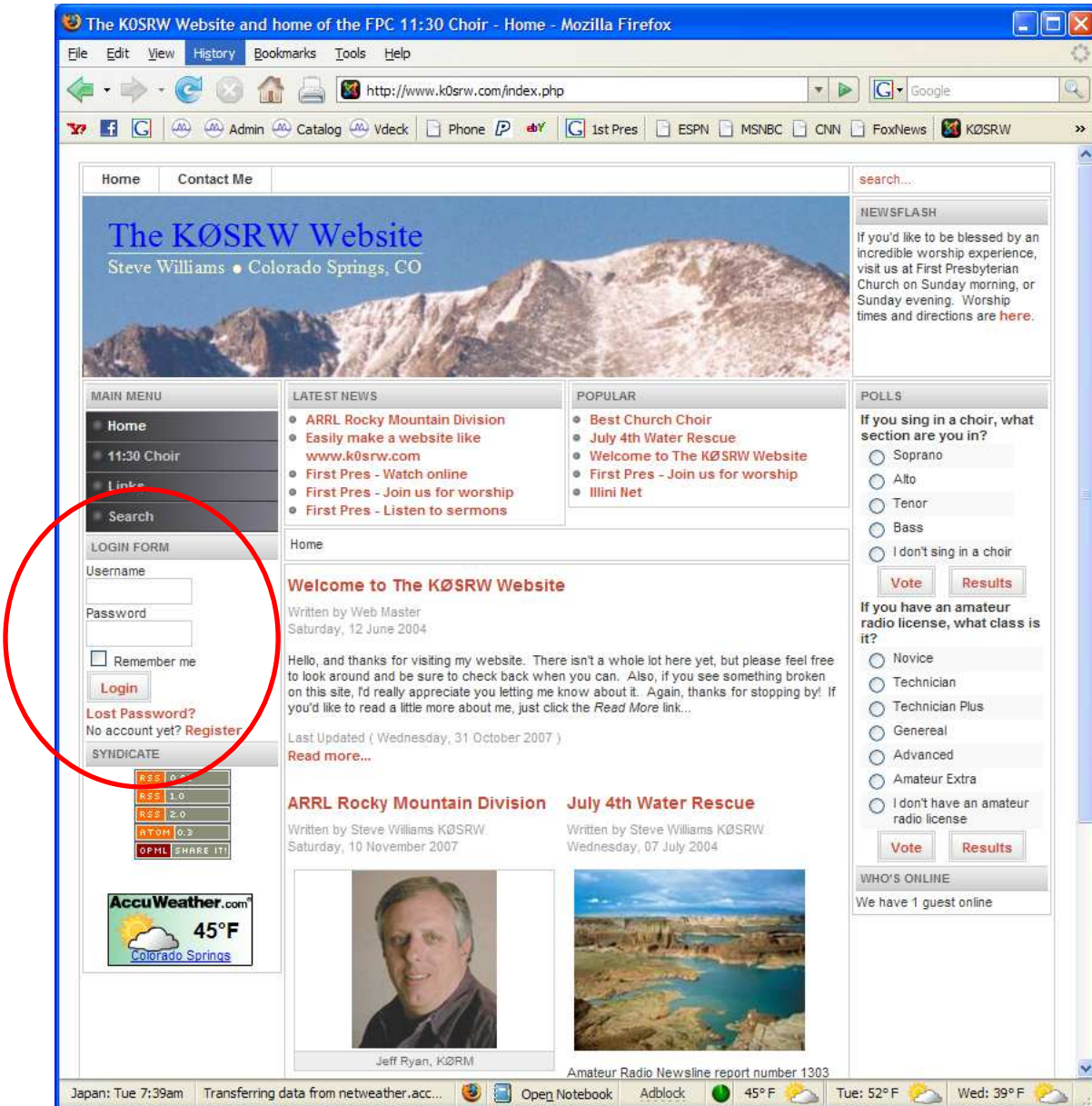
Basically, a web server is a program that runs on a web hosting computer and is responsible for finding, interpreting and sending content browsers display. It also receives information users type into web pages displayed within their browsers.

Joomla runs with the different web servers that work with PHP, MySQL and satisfies other Joomla internal requirements. Joomla recommends Apache, and Joomla's testing has been with Apache, so you'll minimize your headaches if you use Apache rather than attempting to use another web server. If you want to learn more about web servers in general, I found [this article](#) to be helpful and you can learn more about the Apache Web Server at [Apache.org](#).

## Editing Content

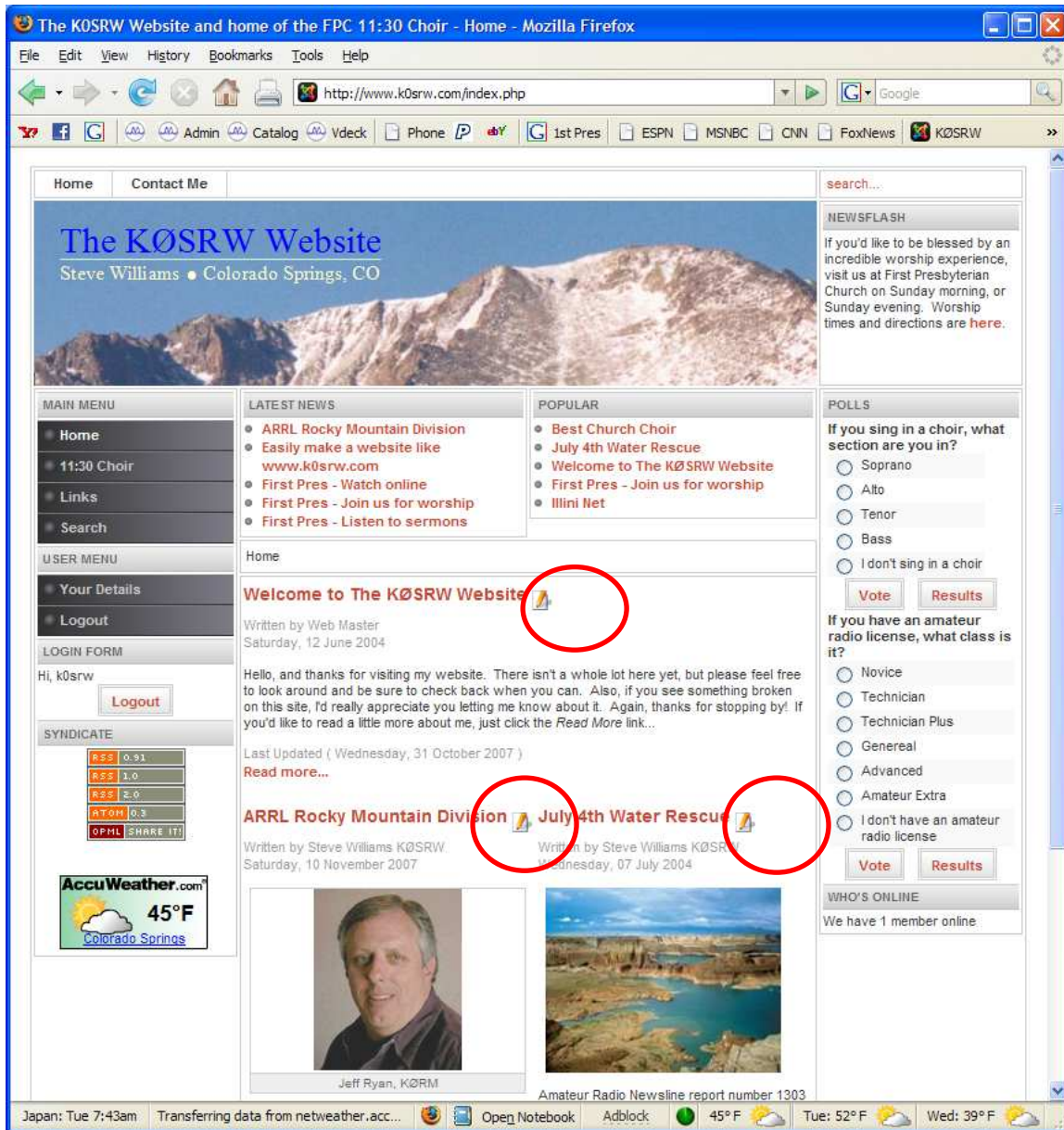
One of the most significant advantages of the Joomla CMS system is being able to edit site content right from your browser without even using the Joomla Administrator console.

When you first install your site, the left navigation bar contains a **Login Form**. Assuming that you've not removed the **Login Form** using the Administrator console, you'll see something like this on your site:



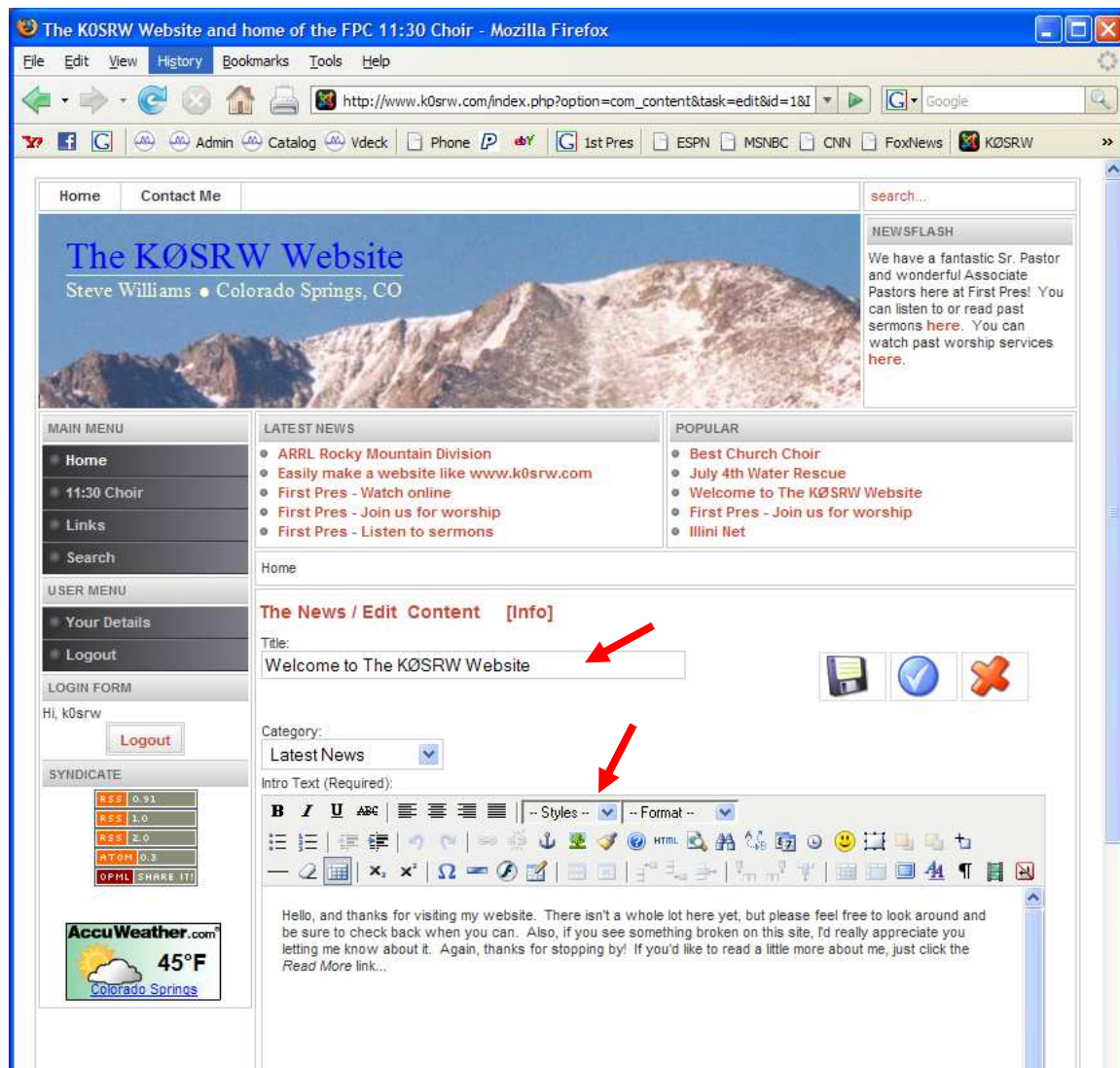
In the **Username** field of the **Login Form**, enter the username **admin**. Then, for the **Password** enter the password you chose during step 3 of the installation process (see November 2007 Ø-Beat, page 25, bottom display). Finally, click the **Login** button.

Your site may change slightly in appearance, especially in the left-hand navigation bar, but you'll also notice new icons next to each of the articles on your site.



When you click on the icons, you'll see an editing display (only the upper section is shown for the moment). This is where you edit the content of the article, add pictures, change what appears on the page, and what appears if the user clicks the *Read more...* link, etc.





You'll note that you can change the title (top red arrow) just by typing in a new title.

You can also edit the text using a text editor with some Microsoft Word-like editing features. Point the cursor over the editor's icons to see what they do.

Before going any farther, experiment with the editor, and change the default article to something closer to what you want to see on your site. When you're finished with the changes, click the **Save** button to see your new article.

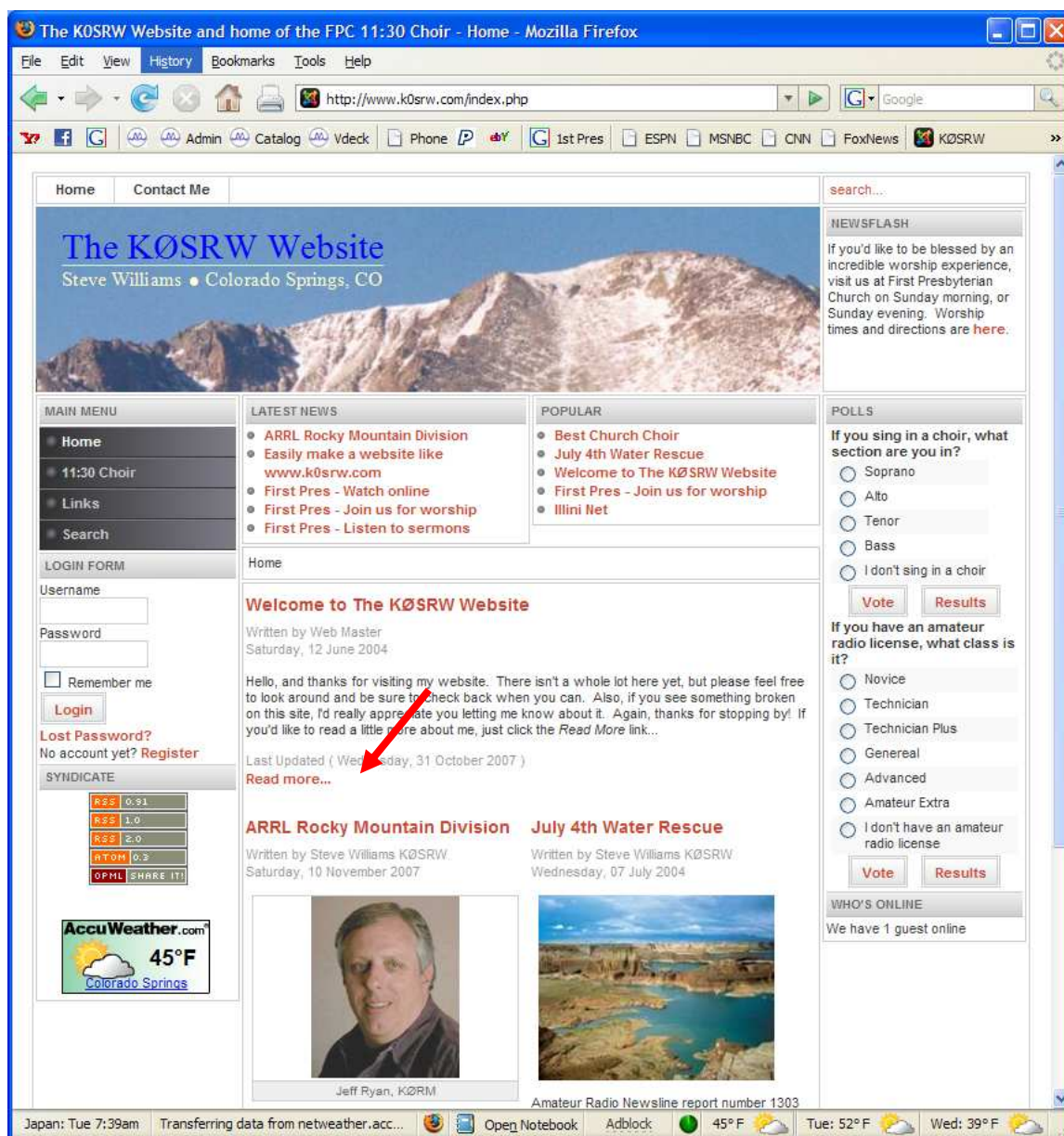


When you click the **Save** button, you actually wind up on a page on your site where your entire article is displayed without the *Read more...* line. We'll look at that feature in a moment, but if this happens, just click the **Home** button on your site, and you should be back on the front page.


**Congratulations!** you've just edited your site content without performing one bit of programming and without writing or needing to know HTML! Yes, this is a simple example, but after a few more examples here and a few within the Joomla Administrator console, you'll be able to edit and write content like a professional web developer.

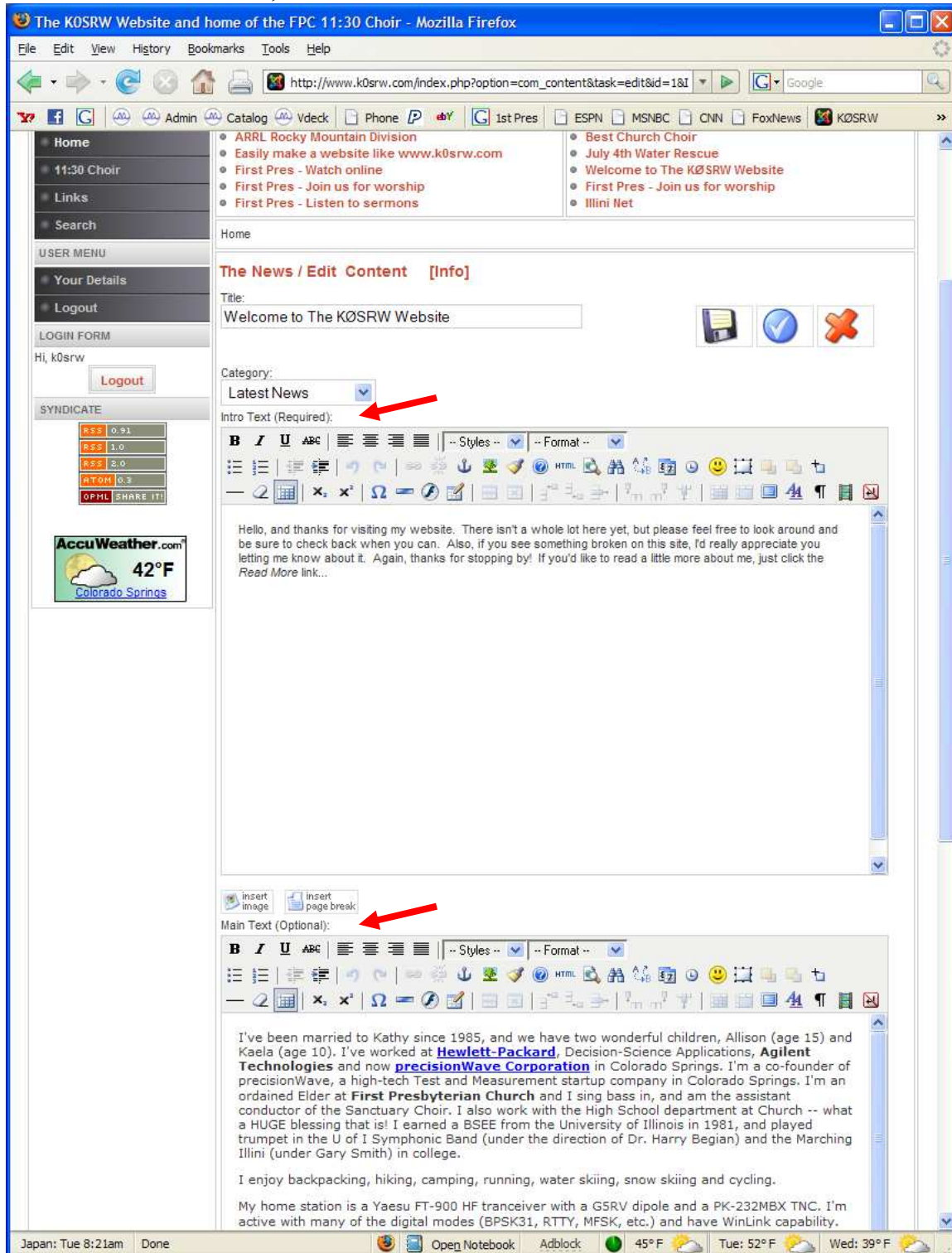
### What's the Read More link?

Most websites don't present entire lengthy articles without a specific request from the user to see the whole article. Joomla provides the same function. In examining the display below, and in looking at your own site, note the presence of the **Read more...** link.



Clicking **Read more...** brings the user to a display of the full article.

Click the edit icon  on one of the articles again. By using your browser's vertical scroll bars, you'll find Joomla displays not one but two editing windows. The top window is for editing the text that appears on your site above the **Read more...** link and the bottom window is for editing the rest of the article. The top window is the **Intro Text** window, and the bottom window is the **Main Text** window.




The screenshot shows the Joomla! article editing interface in Mozilla Firefox. The browser title is "The K0SRW Website and home of the FPC 11:30 Choir - Mozilla Firefox". The address bar shows "http://www.k0srw.com/index.php?option=com\_content&task=edit&id=18&". The page has a sidebar with navigation links like Home, 11:30 Choir, Links, Search, and a USER MENU with Your Details and Logout. The main content area is titled "The News / Edit Content [Info]". It shows a "Title" field with "Welcome To The K0SRW Website" and a "Category" dropdown set to "Latest News". Below this is the "Intro Text (Required):" field, which contains a paragraph of text. A red arrow points to this field. Below the Intro Text is the "Main Text (Optional):" field, which also contains a paragraph of text. A red arrow points to this field. Both text areas have a rich text editor toolbar above them. The status bar at the bottom shows "Japan: Tue 8:21am", "Done", and a system tray with various icons and temperatures.

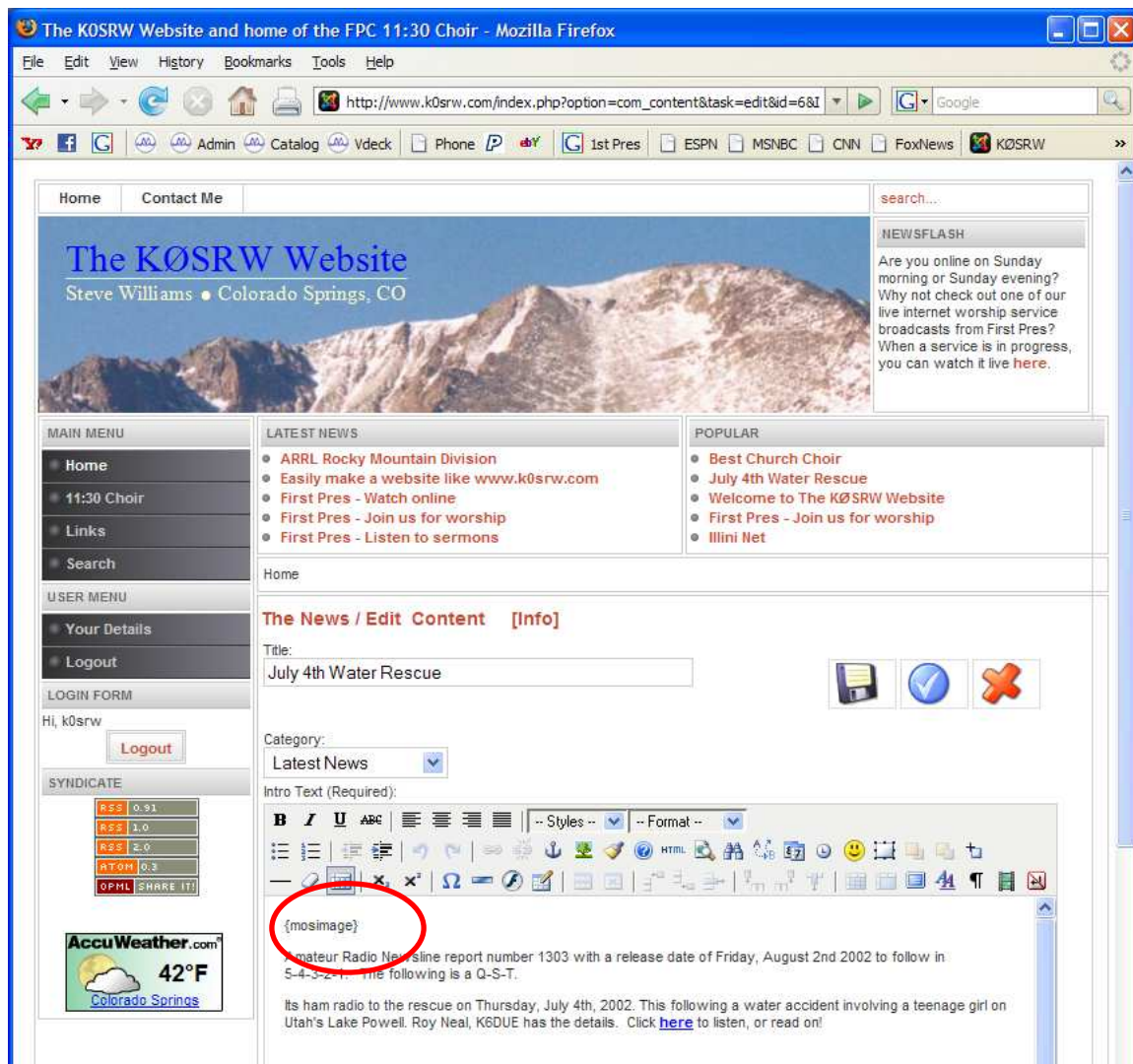


Experiment by editing in both the top and bottom editors. Use the **Save** button periodically to see and check your work.

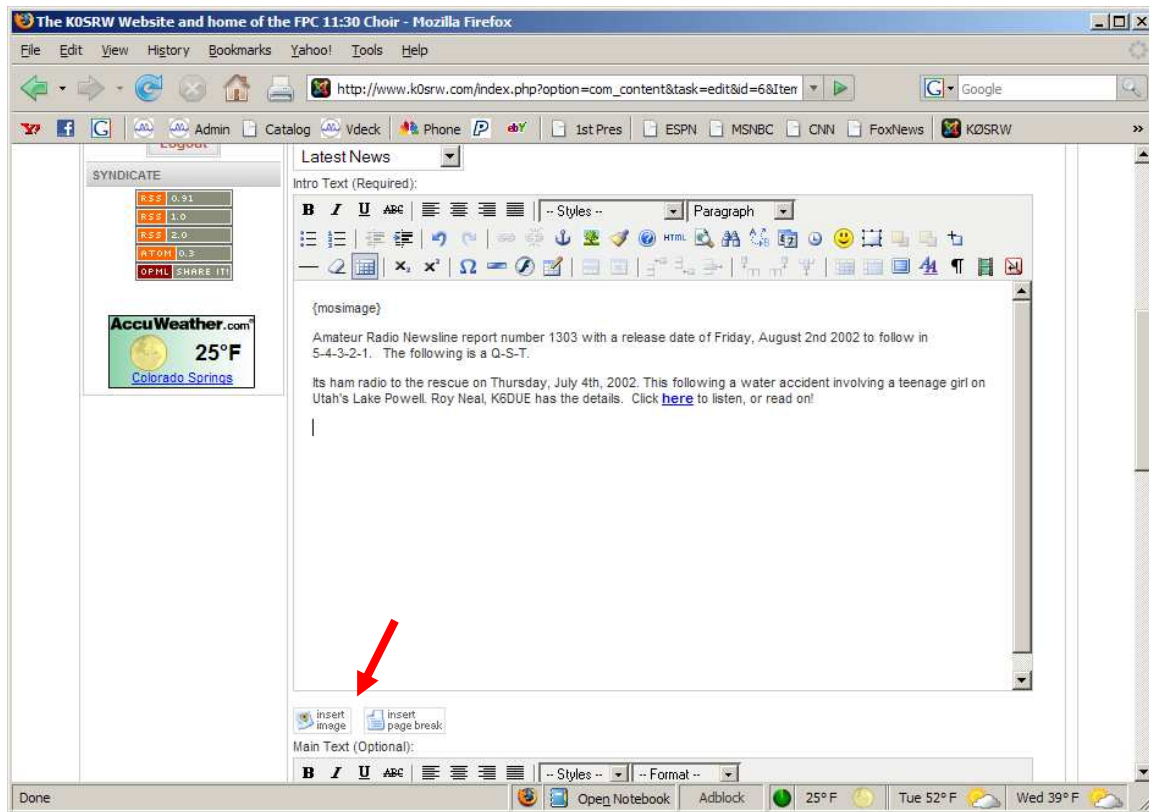
## A Picture is Worth a Thousand Words

Most beginning web developers err on the side of having way too much text, not enough white space and not enough pictures. Appropriate pictures and graphics generate interest and can convey a tremendous amount of information with a single glance, so they should be used liberally and it's very easy to add pictures to your articles.

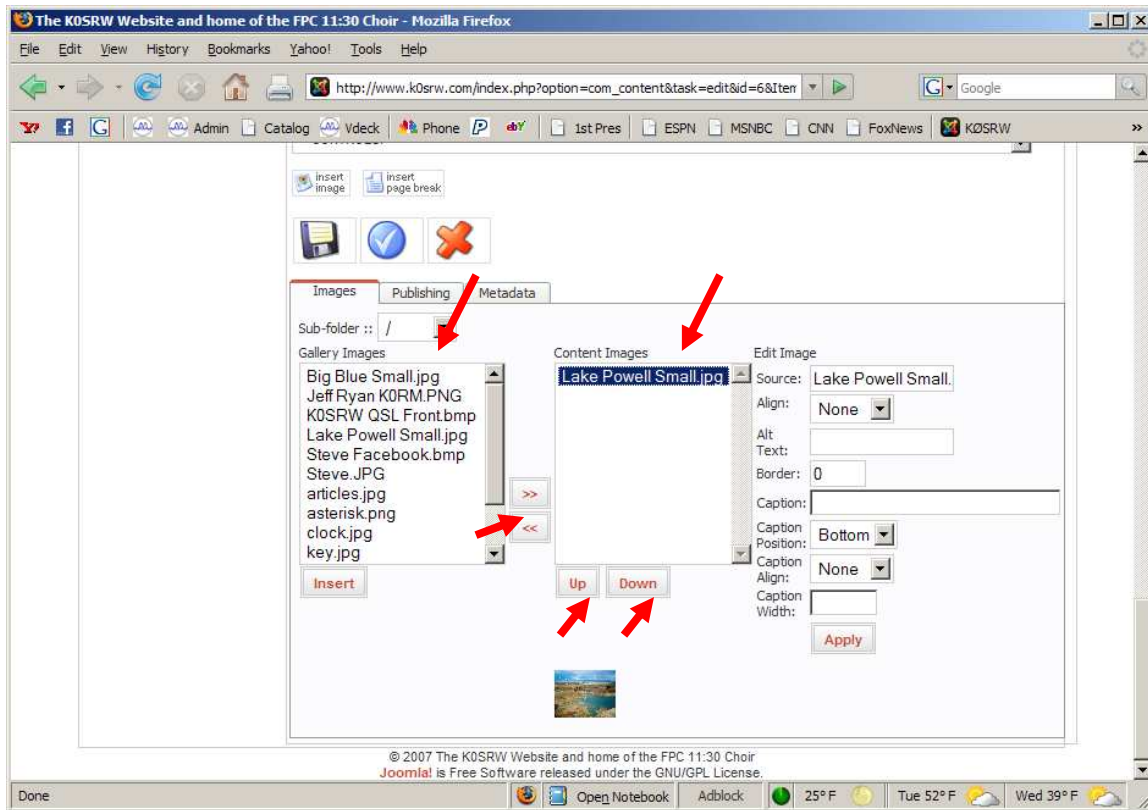
First, click the edit icon  on one of the articles but select an article that contains a picture or graphic. You'll see the familiar display below, but note the presence of the `{mosimage}` item where the picture would normally be:



{mosimage} items are inserted into your text whenever you want a picture to be displayed. To insert an image, just click on the **Insert Image** button below the editing window where you're working. The image won't actually be inserted into the window; you'll get the {mosimage} statement.



To specify which image to use, as well as other image attributes, scroll down below the **Main Text** editor window, and you'll find the following:



The **Gallery Images** list on the right shows the names of all the images uploaded into the **images/stories** directory of your Joomla installation. Joomla doesn't yet provide a way to load new images to your website without using an FTP tool, such as **CuteFTP**, to load them into the **images/stories** directory.

The **Content Images** list in the center shows the names of all the images that you've added to article you're presently working on. Each image name in this list corresponds to a {mosimage} entry somewhere in your text. Further, the first image named in the list corresponds to the first {mosimage} location, the second image to the second {mosimage} location, etc. Order is important here.

The basic method of inserting an image into your text then is to add {mosimage} statements into your text where you want images inserted. Then, click on an image in the **Gallery Images** list, and use the >> button to place the image into the **Content Images** list. You can then select an image from the **Content Images** list, and use the **Up** and **Down** buttons to adjust the ordering.

When you're finished adding images, just click the **Save** button to see how things turned out.

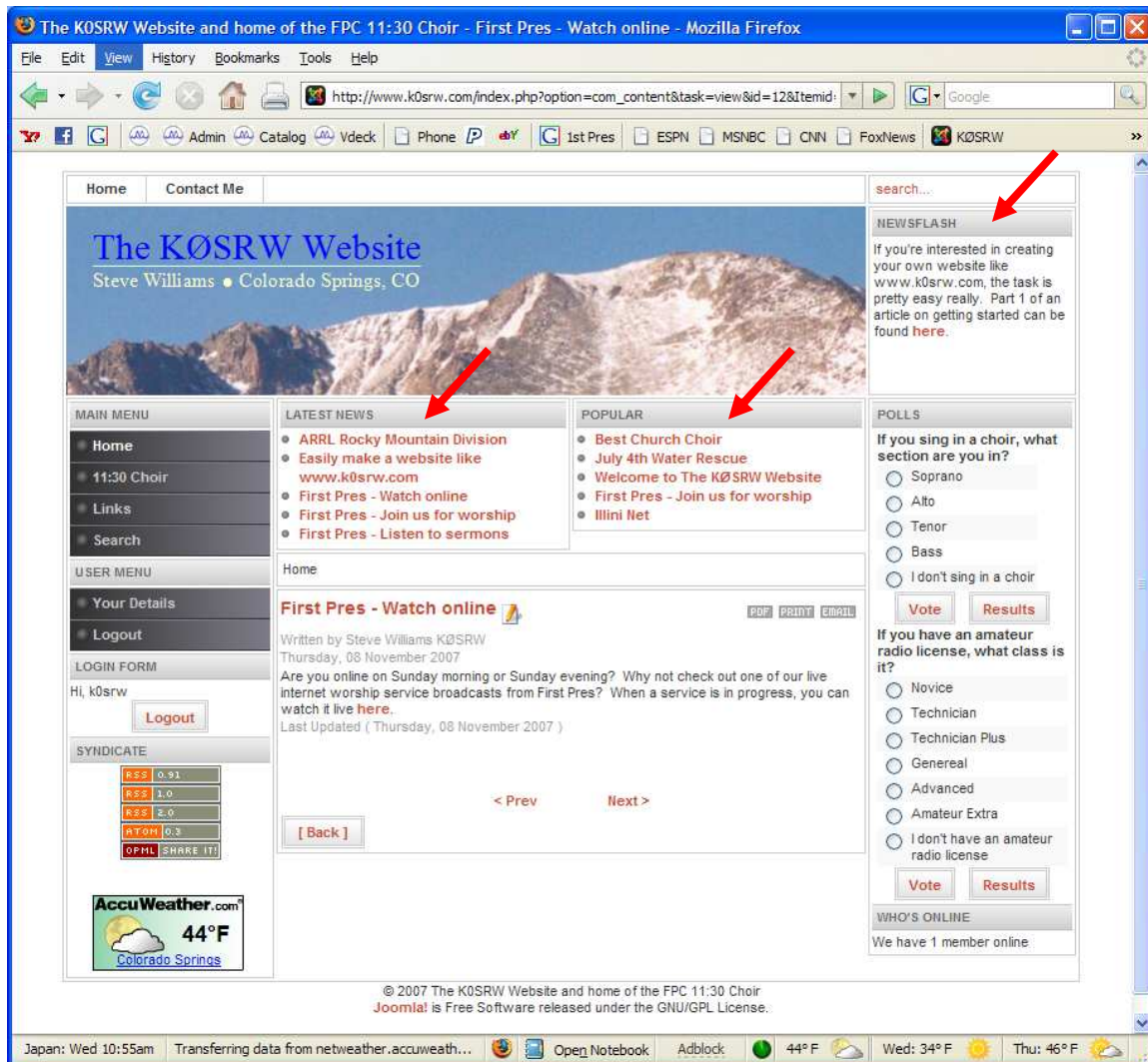


Experiment and add a few images to one of the articles. The image controls in the **Edit Image** section won't be described in this article, but you can check the various references listed in Part One or just experiment with them to see how they work.



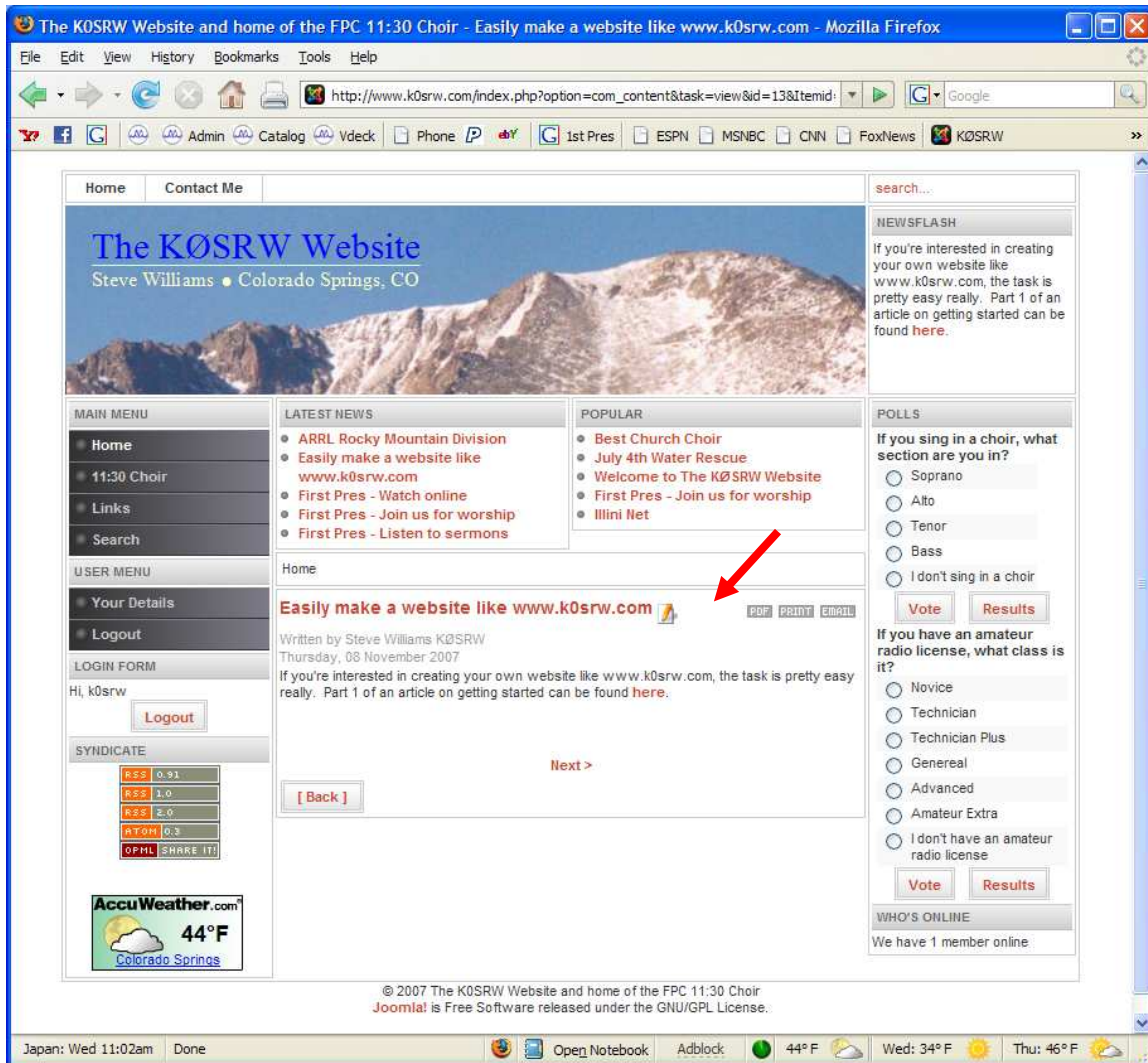
## Editing Newsflash Items


By now, you've gained some serious experience editing articles, but what about editing the newsflashes? Newsflashes are the short comments that appear in the upper right corner of your template website as shown below.



Good news. You already know how to edit these because the process is identical to editing articles. You just click on the newsflash title in the **Latest News** list that shows the most recent news items, or in the **Popular** list that shows the most frequently accessed news items. (If the newsflash you'd like to edit doesn't show up in either of these lists, you'll have to use the Joomla Administrator functions to edit it.)

When you click on a newsflash in either the **Latest New** list or the **Popular** list, you'll see a display like the one that follows.










By clicking on the edit icon  you'll be in familiar territory with an **Intro Text** and a **Main Text** editor as described earlier. Note that newsflashes don't usually contain pictures, are one or two sentences long, and usually are all contained in the **Intro Text**. But Joomla doesn't apply this rule, so feel free to be as creative as you'd like.

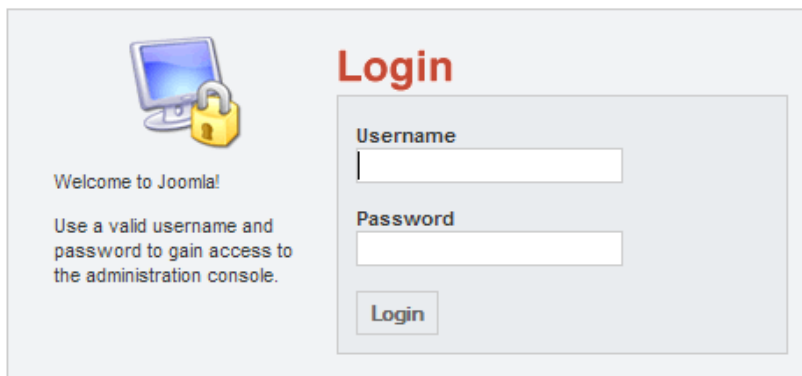
## The Joomla Administrator

If you poke around more on your template web site, you'll notice there isn't a way to edit the polls, change the navigation buttons, adjust the links, or do lots of other things you'll want to do. Fortunately, the **Joomla Administrator** provides complete control over nearly every

facet of your site. You'll be able to do the following things within the **Joomla Administrator**:

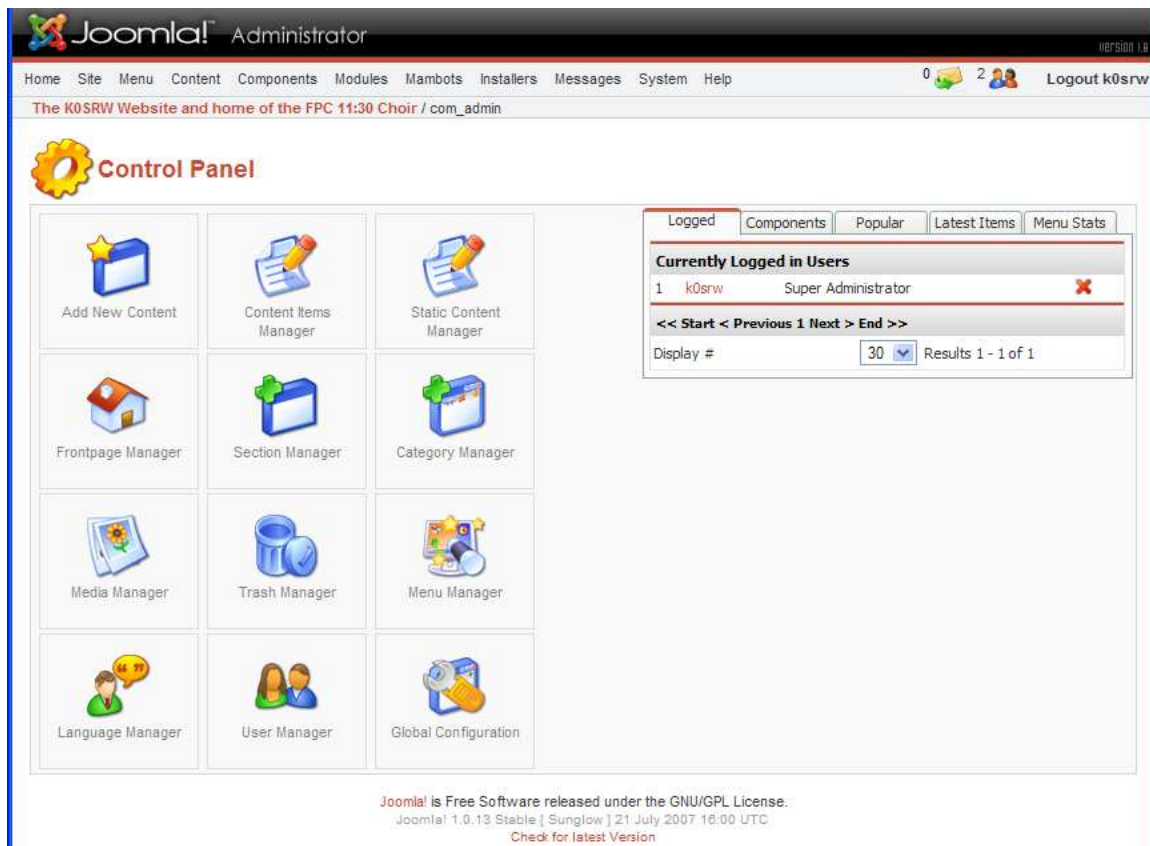
-  Create/edit/delete news flashes, articles and other forms of content.
-  Set up polls to ask questions of your users.
-  Edit the site navigation links and buttons.
-  Add new components to your site for functions like photo download and upload, PayPal payments, blogs, discussion forums, etc.
-  Change the overall look of your site.
-  Give different site access privileges to various users.
-  And much, much more.

To access the **Joomla Administrator**, click the **Administrator** button on your website, or if no such button is visible, just point your browser to <http://www.yourwebsite.com/administrator>. (Of course, you'll need to substitute your domain name into this URL (Uniform Resource Locator). As an example, my domain name is [www.k0srw.com](http://www.k0srw.com), so you would access my Administrator panel via <http://www.k0srw.com/administrator>. Good luck guessing my password. In either case, you'll be prompted to login in order to access the administrator functions:

The image shows the Joomla Administrator login interface. On the left, there is a graphic of a computer monitor with a yellow padlock in front of it. Below the graphic, the text reads: "Welcome to Joomla!" and "Use a valid username and password to gain access to the administration console." On the right, the word "Login" is displayed in a large, bold, red font. Below this, there is a form with two input fields: "Username" and "Password". Each field has a small cursor icon at the beginning. Below the "Password" field is a "Login" button with a small square icon to its left.

In the display above, enter **admin** as the username, then enter the password that you used during step 3 of the Joomla installation process (see November 2007 Ø-Beat, page 25, bottom display). Once logged in, you'll see the home page of the Administrator screen as shown below.





From here, you can control nearly every aspect of your site.

I won't be able to address all of the administrator functions in this article, but since your site has been populated with "placeholders" for lots of content, you should be able to figure out a lot on your own. Also, don't forget to check the reference materials listed at the end of Part One.

One other helpful note: if you're deep within an Administrator function and want to get back to the home page that you see above, just click **Home** on the Administrator's menu bar, but be sure to save your work before clicking **Home**!

## Adding New Content

Earlier in this article, you learned how to edit existing content. Here, we'll discuss how new content can be written. The first step, as you might have already guessed, is to click the

upper left button entitled **Add New Content**. You'll see the following display, which thankfully looks a lot like the editing displays you worked with earlier.

The screenshot shows the Joomla! Administrator interface in a Mozilla Firefox browser window. The title bar reads "The K0SRW Website and home of the FPC 11:30 Choir - Administration [Joomla!] - Mozilla Firefox". The address bar shows the URL: [http://www.k0srw.com/administrator/index2.php?option=com\\_content&sectionid=0&task=new&7af7a](http://www.k0srw.com/administrator/index2.php?option=com_content&sectionid=0&task=new&7af7a). The Joomla! Administrator header includes a navigation menu (Home, Site, Menu, Content, Components, Modules, Mambots, Installers, Messages, System, Help) and a user status bar (0 visitors, 1 logged in, Logout k0srw). The main content area is titled "Content Item: New" and features a red arrow pointing to the "Add New Content" button in the top right. The interface is divided into two main sections: "Item Details" on the left and "Publishing Info" on the right. The "Item Details" section includes fields for Title, Title Alias, Section (Select Section), and Category (Select Category). Below these is a rich text editor for the "Intro Text: (required)" with a toolbar containing various formatting options. A red arrow points to the "Intro Text" field. The "Main Text: (optional)" section also has a rich text editor. The "Publishing Info" section on the right includes options for "Show on Front Page" (unchecked), "Published" (checked), "Access Level" (Public), "Author Alias" (empty), "Change Creator" (Steve Williams K0SRW), "Ordering" (New Items default to the first place), "Override Created Date" (empty), "Start Publishing" (2007-11-27 19:42:56), "Finish Publishing" (Never), "State" (Published), "Hits" (0 times), "Revised" (New document), and "Created" (Not modified). A red arrow points to the "Published" checkbox. The bottom status bar shows the date and time: "Japan: Wed 11:50am Done".

There are also the familiar **Intro Text** and **Main Text** editors, as well as a number of other controls. To write a new newsflash, for example, you would follow these steps:

- In the **Title** text box, give the newsflash a title.
- In the **Section** control, choose **Newsflashes**.
- Write a sentence or two in the **Intro Text** box.
- Click the **Save** button in the upper right corner.

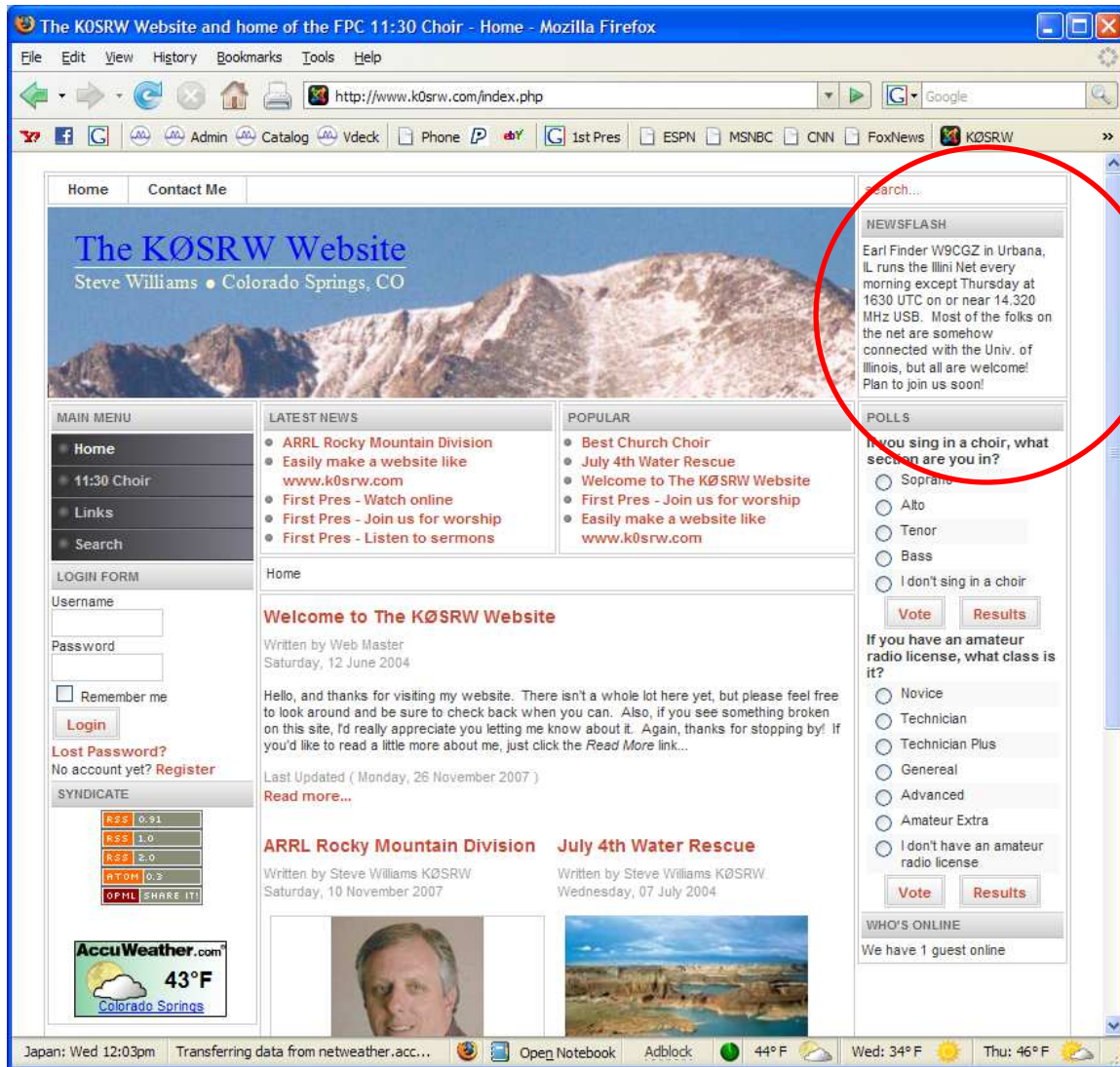
Next, you'll get a pretty complicated display like the one below, but you don't really need to bother with anything here just yet.

The screenshot shows the Joomla! Administrator interface for the K0SRW website. The top navigation bar includes links for Home, Site, Menu, Content, Components, Modules, Mambots, Installers, Messages, System, and Help. The toolbar contains icons for Archive, Publish, Unpublish, Move, Copy, Trash, Edit, New, and Help. A message at the top indicates 'Successfully Saved Item: July 4th Water Rescue'. The main content area is the 'Content Items Manager' for the 'com\_content' section. It displays a table of 13 content items with columns for #, Title, Published, Front Page, Reorder, Order, Access, ID, Section, Category, Author, and Date. The items include 'Example FAQ Item 1', 'Example FAQ Item 2', 'Welcome to The K0SRW Website', 'ARRL Rocky Mountain Division', 'July 4th Water Rescue', 'Best Church Choir', 'Example News Item 4', 'ffff', 'Easily make a website like www.k0srw.com', 'First Pres - Watch online', 'Mini Net', 'First Pres - Join us for worship', and 'First Pres - Listen to sermons'. The bottom of the interface shows pagination controls and a status legend.

#	Title	Published	Front Page	Reorder	Order	Access	ID	Section	Category	Author	Date
1	Example FAQ Item 1	✗	✗	▼	5	Public	10	FAQs	Example FAQs	Steve Williams K0SRW	05/12/04
2	Example FAQ Item 2	✗	✗	▼	5	Public	11	FAQs	Example FAQs	Web master	05/12/04
3	Welcome to The K0SRW Website	✓	✓	▼	1	Public	1	News	Latest News	Web Master	06/12/04
4	ARRL Rocky Mountain Division	✓	✓	▼	2	Public	8	News	Latest News	Steve Williams K0SRW	11/10/07
5	July 4th Water Rescue	✓	✓	▼	3	Public	6	News	Latest News	Steve Williams K0SRW	07/07/04
6	Best Church Choir	✓	✓	▼	4	Public	7	News	Latest News	Steve Williams K0SRW	07/07/04
7	Example News Item 4	✗	✗	▼	5	Public	9	News	Latest News	Steve Williams K0SRW	07/07/04
8	ffff	✓	✗	▼	1	Public	14	Newsflashes	Newsflash	Steve Williams K0SRW	11/27/07
9	Easily make a website like www.k0srw.com	✓	✗	▼	2	Public	13	Newsflashes	Newsflash	Steve Williams K0SRW	11/08/07
10	First Pres - Watch online	✓	✗	▼	3	Public	12	Newsflashes	Newsflash	Steve Williams K0SRW	11/08/07
11	Mini Net	✓	✗	▼	4	Public	2	Newsflashes	Newsflash	Steve Williams K0SRW	08/09/04
12	First Pres - Join us for worship	✓	✗	▼	5	Public	3	Newsflashes	Newsflash	Steve Williams K0SRW	08/09/04
13	First Pres - Listen to sermons	✓	✗	▼	6	Public	4	Newsflashes	Newsflash	Steve Williams K0SRW	08/09/04

Open another browser window and navigate to your website. Each time you refresh your home page, you'll see a different newsflash in the upper right corner. After a few refreshes, you should see your new newsflash appear. It is that easy.



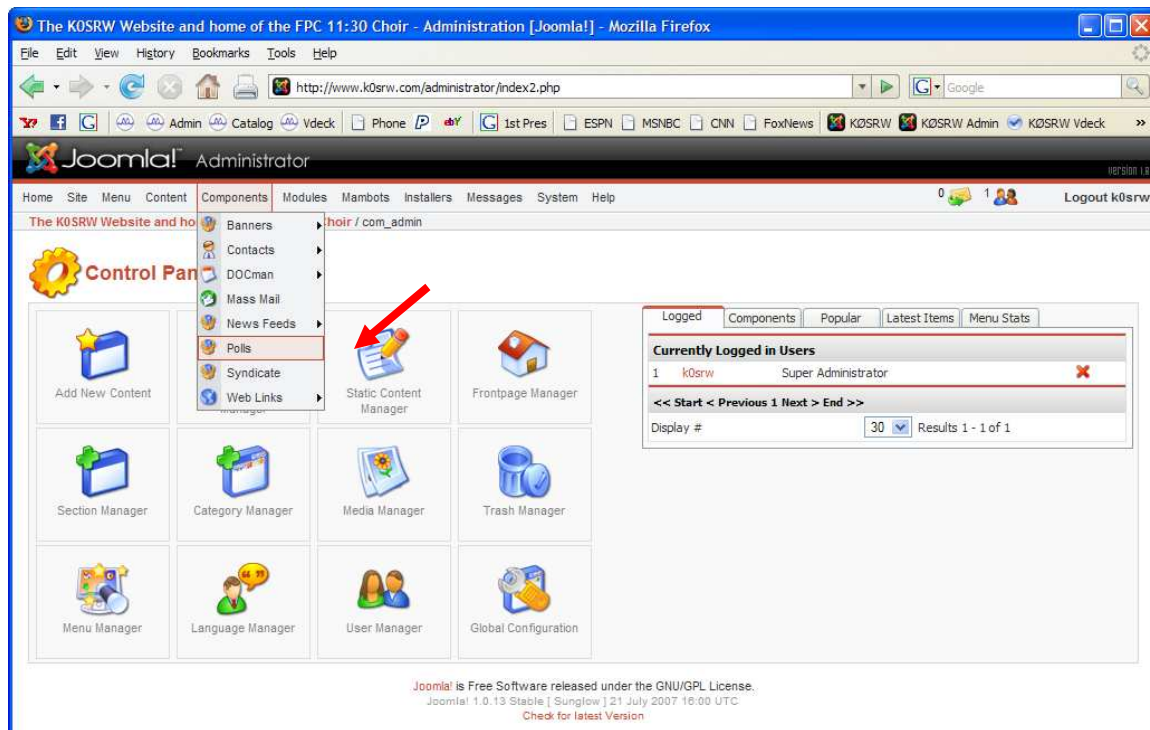


The procedure for writing a new article is similar, but in step **b** above you would select **News** instead of **Newsflashes** in the **Section** control.

## Polling Your Users

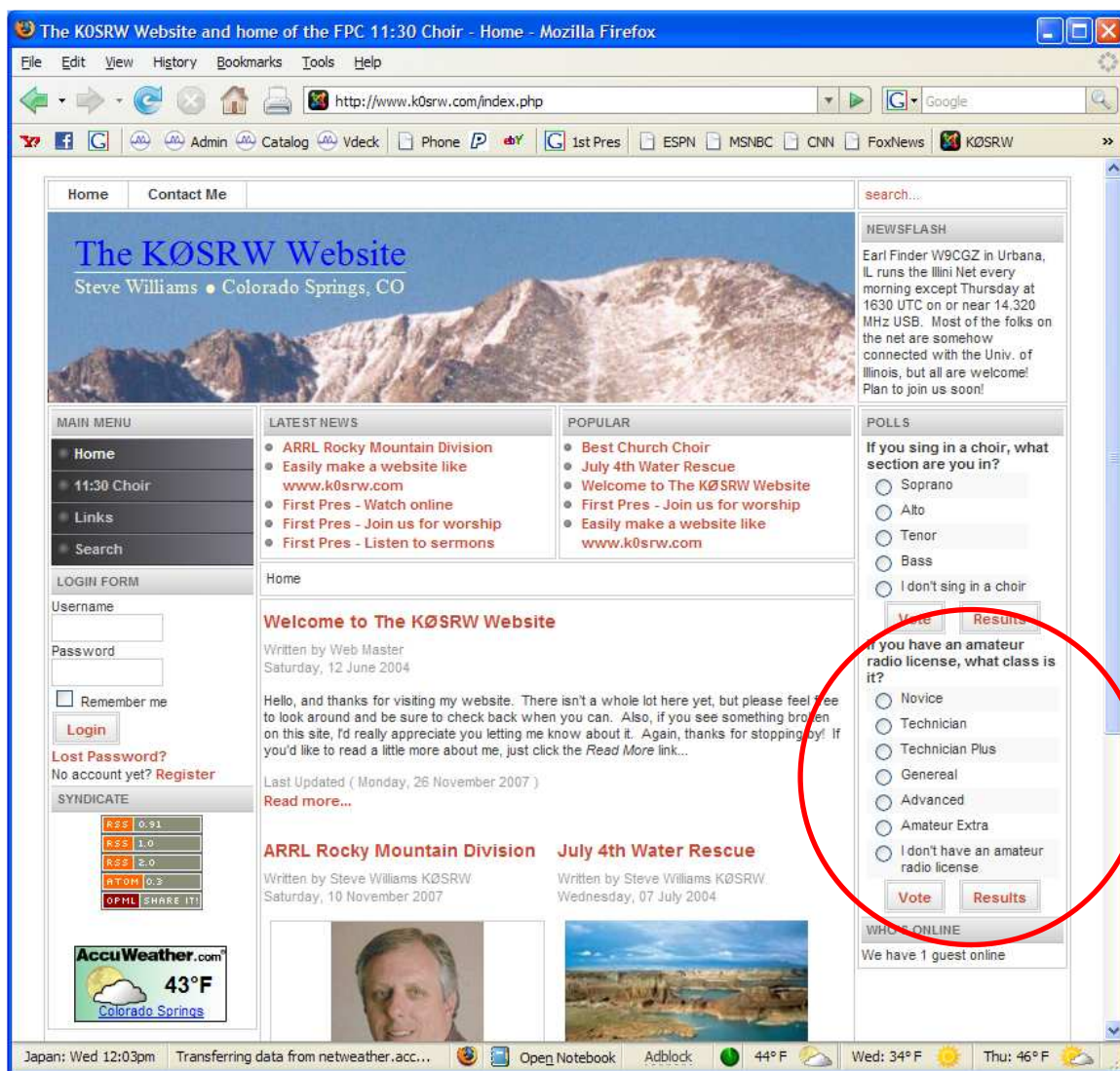
The default Joomla installation comes with a few poll questions shown on the right side of the site. I've changed mine, as you can see below, because I'd like to learn a bit about what license class my site's visitors hold, and I'd like to know if my visitors sing in a choir.

You'll notice that the Joomla Administrator home page doesn't have a button that deals with polls, but if you expand the **Components** menu item, you'll find relevant controls.



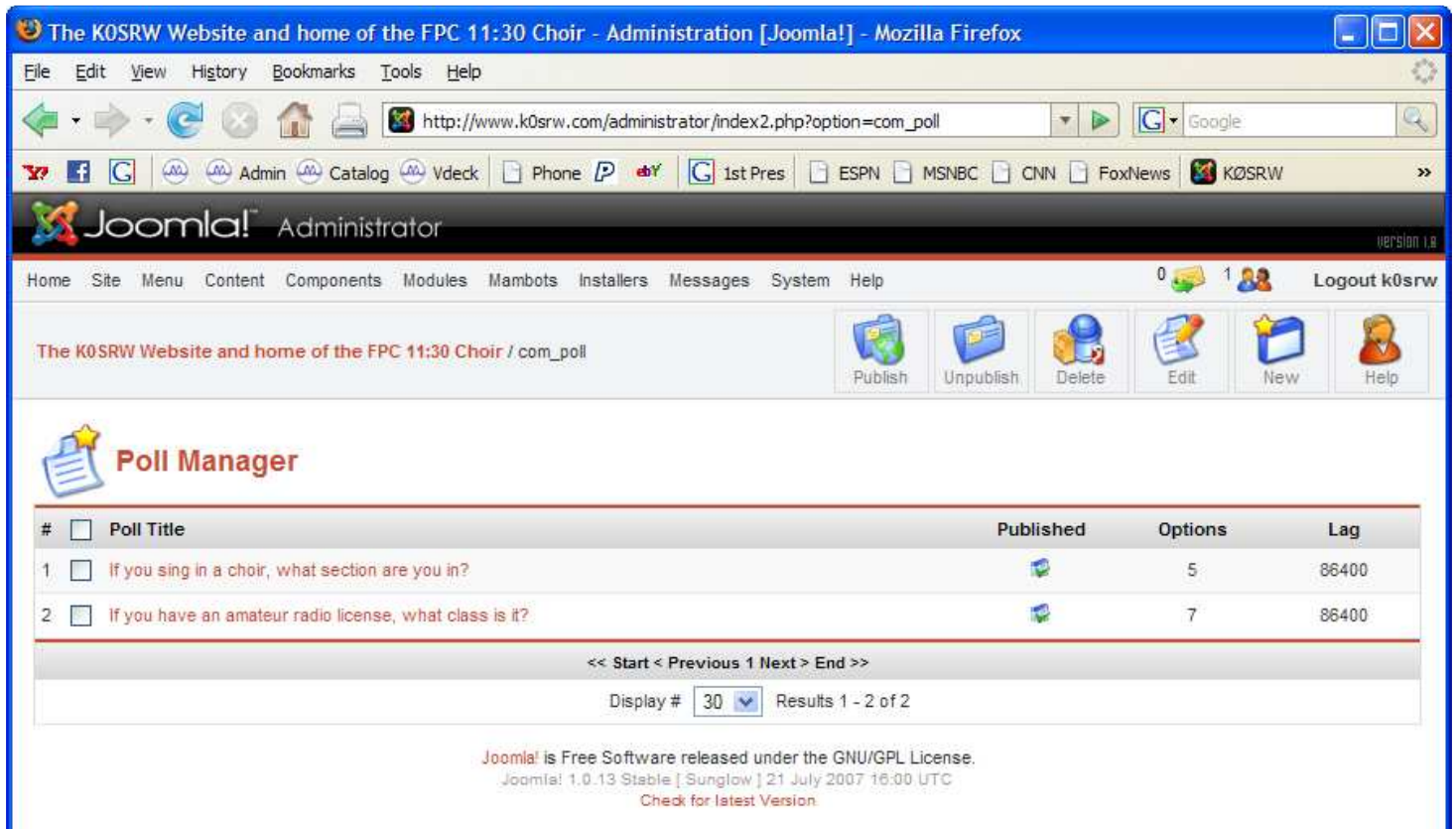
The “poll” function is actually a Joomla add-in component, along with things like Banner controls, Contact lists, Document managers, etc. We’ll talk more about Components next month.

First, recall that one of my polls looks like this to my site visitors:







Select **Components** | **Polls** from the menu bar, and you'll see a display like this:



The Joomla! Administrator interface displays the Poll Manager. The browser window title is "The K0SRW Website and home of the FPC 11:30 Choir - Administration [Joomla!] - Mozilla Firefox". The Joomla! Administrator menu bar includes Home, Site, Menu, Content, Components, Modules, Mambots, Installers, Messages, System, and Help. The main content area shows the Poll Manager with a table of two polls.

#	<input type="checkbox"/> Poll Title	Published	Options	Lag
1	<input type="checkbox"/> If you sing in a choir, what section are you in?		5	86400
2	<input type="checkbox"/> If you have an amateur radio license, what class is it?		7	86400

<< Start < Previous 1 Next > End >>

Display #  Results 1 - 2 of 2

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Joomla! 1.0.13 Stable [Sunglow] 21 July 2007 16:00 UTC  
[Check for latest Version](#)

Click on one of the poll names, and your next steps should be fairly obvious from the following display.

The screenshot shows the Joomla! Administrator interface for editing a poll. The browser window title is "The K0SRW Website and home of the FPC 11:30 Choir - Administration [Joomla!] - Mozilla Firefox". The Joomla! Administrator version is 1.0. The page title is "Poll: Edit".

**Details**

Title: If you have an amateur radio license, what class is it?

Lag: 86400 (seconds between votes)

Published: ☐ No ☒ Yes

Options:

1	Novice
2	Technician
3	Technician Plus
4	General
5	Advanced
6	Amateur Extra
7	I don't have an amateur radio license
8	
9	
10	
11	
12	

Show on menu items:

- All
- None
- Unassigned
- mainmenu | Home
- mainmenu | 11:30 Choir
- mainmenu | Links
- mainmenu | Search
- topmenu | Home
- usemenu | Your Details
- usemenu | Logout

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Japan: Wed 12:24pm Done Open Notebook Adblock 44° F Wed: 34° F Thu: 46° F

From top to bottom:

**Title** is the name of your poll. This is the question you ask site visitors.

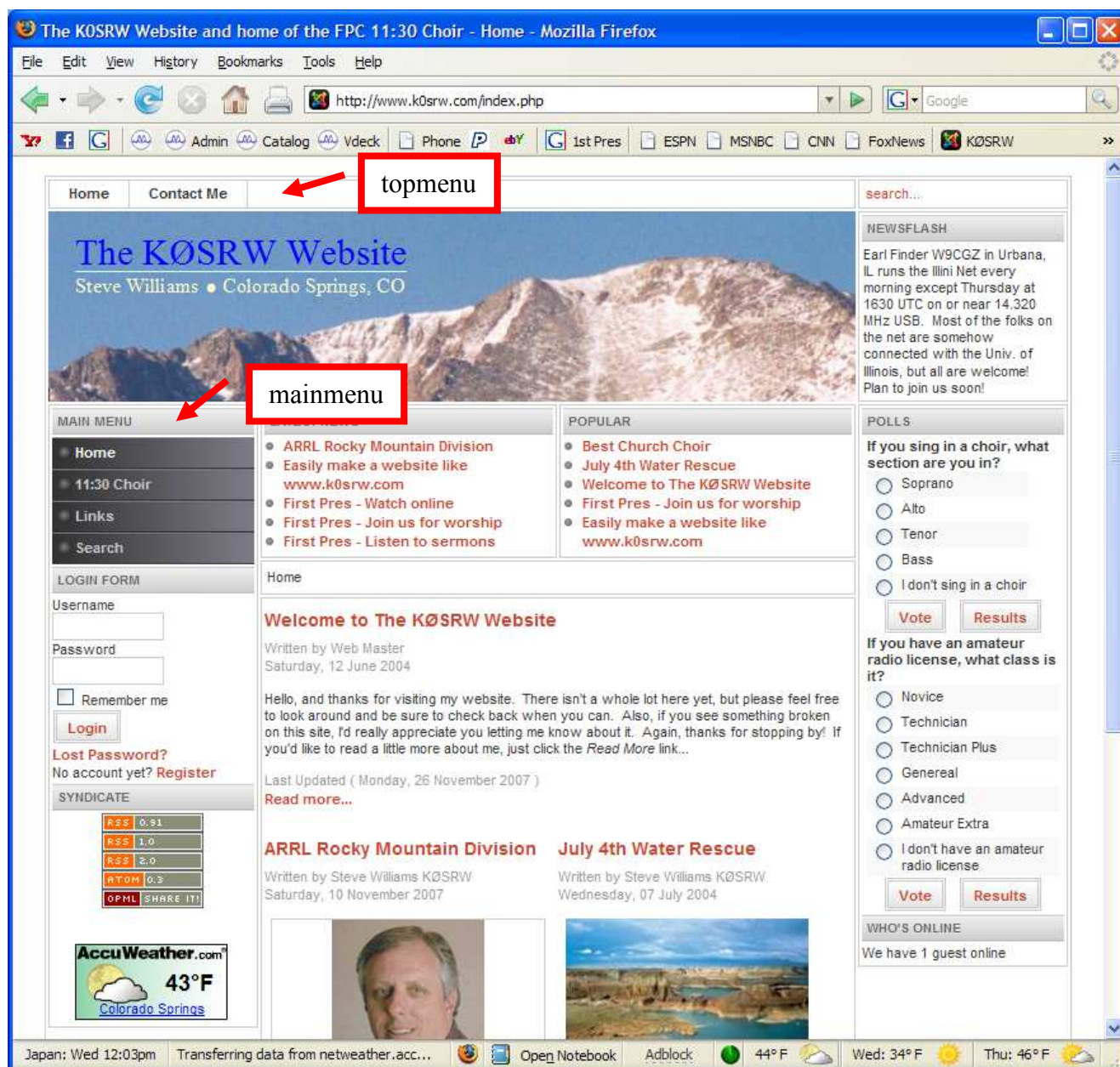
**Lag** allows you to specify the length of time between votes from the same user.

**Published** lets you enable or disable the poll. Published polls are visible on your site, while non-published polls aren't.

**Options** lets you specify the list of responses from which a site visitor chooses. It's always a good idea to have some catch-all category for users that don't relate to any of the options you provide.

The control on the right – **Show on menu items** – lets you select on which site pages your poll appears. Polls can be displayed on some, all or none of the pages on your site.

In the example above, this poll will be visible only when the user clicks the **Home** button from the mainmenu (the left side navigation bar) or the **Home** button on the topmenu (the upper navigation bar). To select more than one place where the poll appears, just hold down the CONTROL button on your keyboard while clicking on the desired locations.

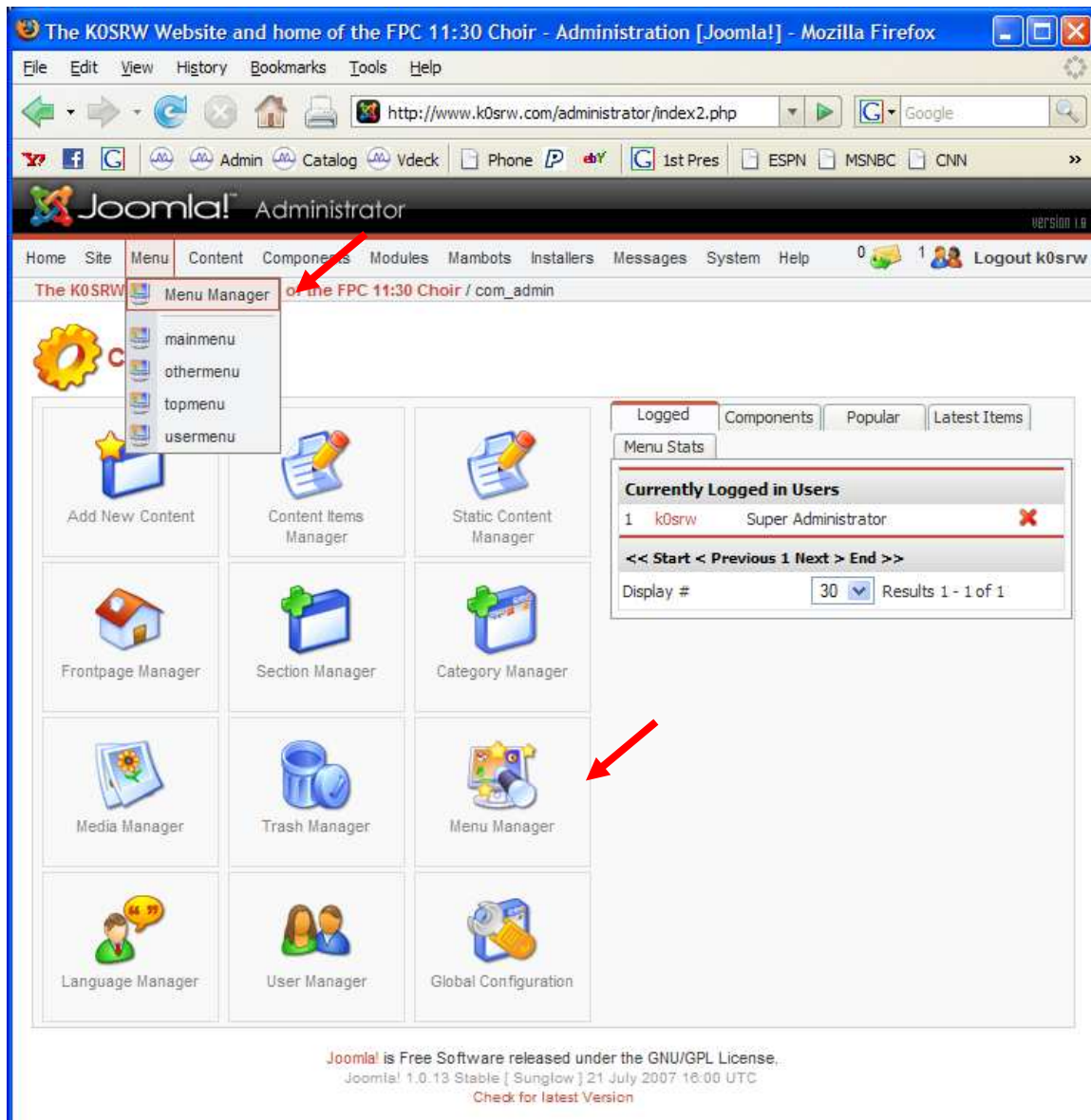




## Changing Your Site's Navigation

Speaking of menus, by now you've noticed that the left navigation buttons, as well as the top navigation buttons are different on my site than on the template site. Joomla let's you adjust these menus to suit your needs and individual design.

To adjust the menus (or navigation bars), click the **Menu Manager** button on the Joomla Administrator home page or select **Menu | Menu Manager** from the menu bar.



The resulting display will be something like this, from which you can choose one of the menus to adjust:

The screenshot shows the Joomla! Administrator interface in a Mozilla Firefox browser window. The browser title is "The K0SRW Website and home of the FPC 11:30 Choir - Administration [Joomla!] - Mozilla Firefox". The Joomla! Administrator header displays the site name and version 1.0. The main content area shows a "Menu Deleted" message and the "Menu Manager" table. The table lists three menus: mainmenu, topmenu, and usermenu. A red arrow points to the "# Published" column for the "mainmenu" row.

#	Menu Name	Menu Items	# Published	# Unpublished	# Trash	# Modules
1	mainmenu		4	-	8	1
2	topmenu		2	-	2	1
3	usermenu		2	3	-	1

Navigation: << Start < Previous 1 Next > End >>

Display # 30 Results 1 - 3 of 3

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Joomla! 1.0.13 Stable [ Sunflow ] 21 July 2007 16:00 UTC  
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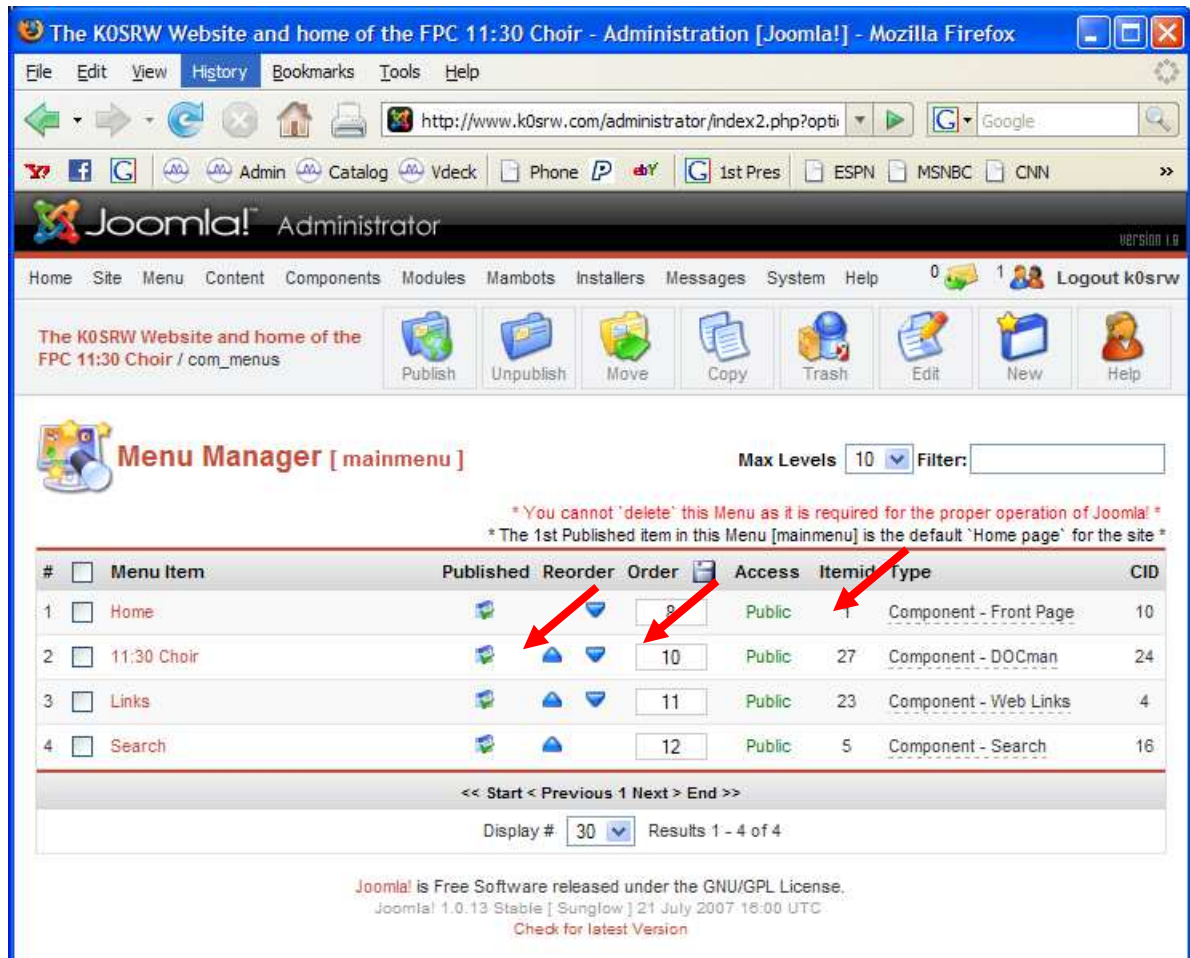
Here, you'll notice three different menus:

**mainmenu** – the left-side navigation menu.

**topmenu** – the top navigation menu.

**usermenu** – the menu added to the **mainmenu** when a user logs into your site.



To edit one of the menus, just click the **Menu Items** icon  to the right of the menu name. This will result in a display like this:




The screenshot shows the Joomla! Administrator interface for the 'mainmenu'. The table lists the following menu items:

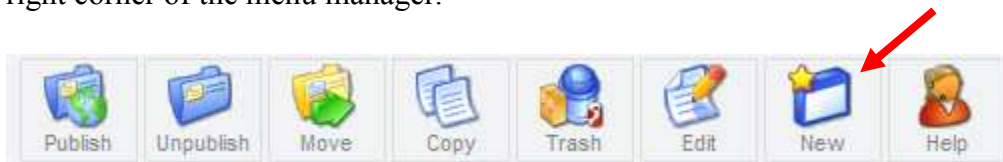
#	Menu Item	Published	Reorder	Order	Access	Itemid	Type	CID
1	Home			8	Public	1	Component - Front Page	10
2	11:30 Choir			10	Public	27	Component - DOCman	24
3	Links			11	Public	23	Component - Web Links	4
4	Search			12	Public	5	Component - Search	16

Below the table, there are navigation links: << Start < Previous 1 Next > End >>. The display shows 30 items, with results 1 - 4 of 4.

Note that the order displayed here is the same order be displayed on your site. You can reorder the items by using the **Reorder**   buttons to move items up and down.

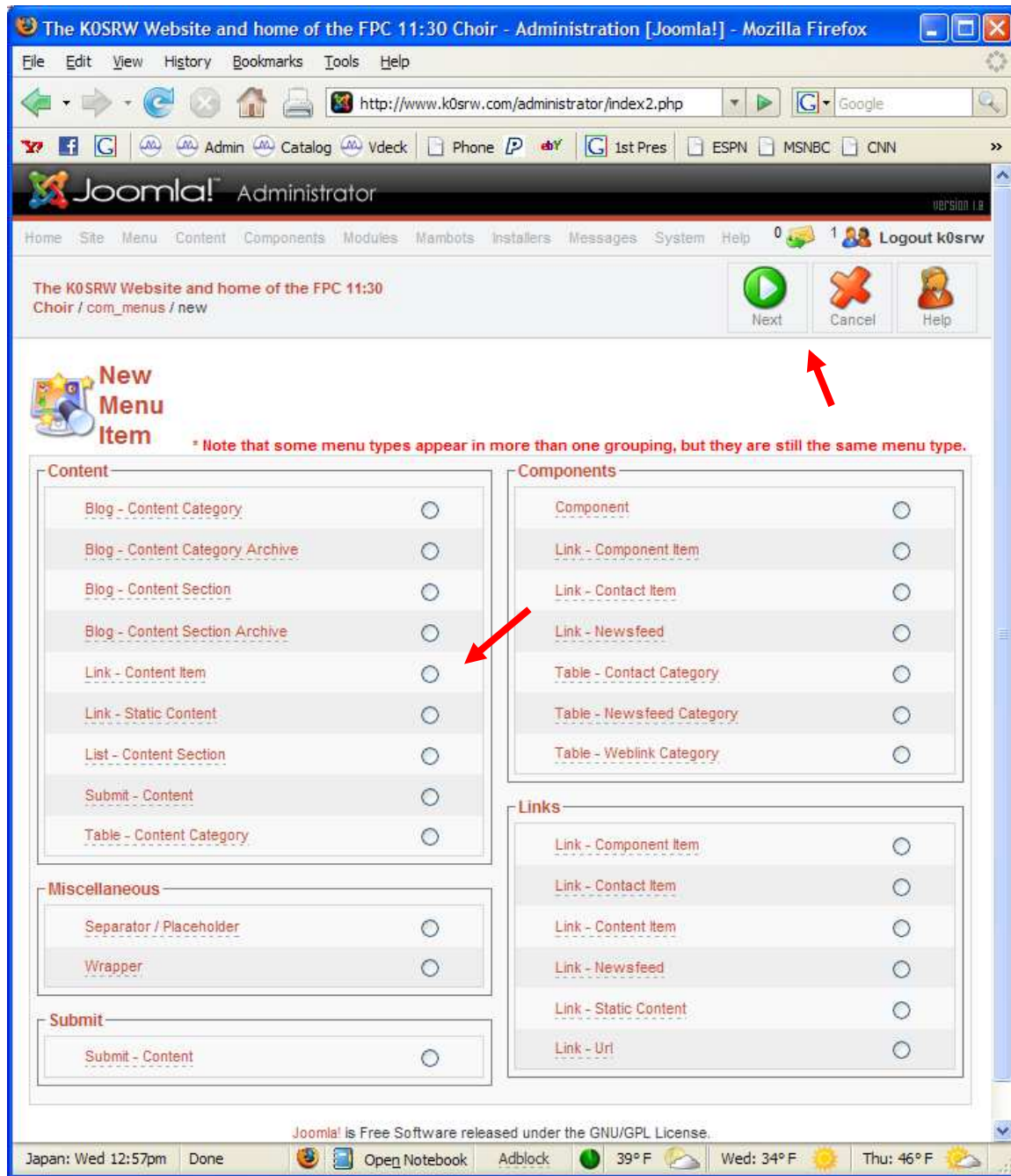
You can enable or disable the item by clicking the **Published**  button. You can even select which user types the button is visible to: **Public** (all users), **Registered** (users that are logged in), or **Special** (logged in users you've granted special access privileges).

To create a button that goes to a particular article, for example, start by clicking the **New** button in the upper right corner of the menu manager.



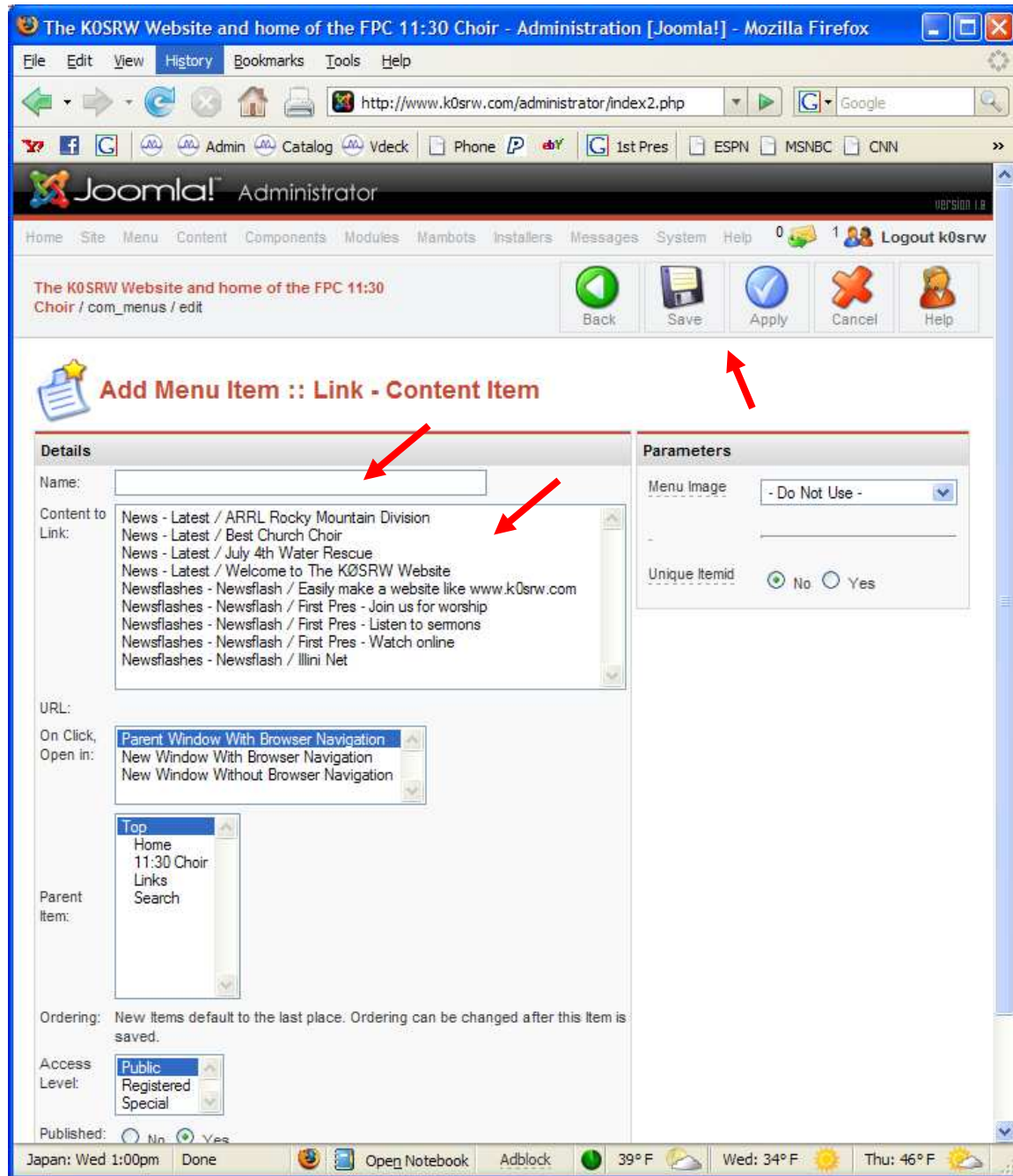


You'll next see a display like this one:



There is much to learn about here, since there are many different options that can be accessed by a navigation button. For now though, select **Link – Content Item** as shown above, then click the green **Next** button.

You'll see a new display with a list of your content items that can be linked:



First, fill in the **Name** field that places text on your navigation button. Next, select one of the content items that you'd like to show users when they click this new navigation button. Accept the rest of the default settings, then click the **Save** button.

The following display will appear. You can now adjust (if you wish) the ordering of the new button with respect to the other buttons using the **Reorder** buttons ▲ ▼.

**Menu Manager [mainmenu]**

Max Levels: 10 Filter:

\* You cannot 'delete' this Menu as it is required for the proper operation of Joomla! \*

\* The 1st Published item in this Menu [mainmenu] is the default 'Home page' for the site \*

#	<input type="checkbox"/> Menu Item	Published	Reorder	Order	Access	Itemid	Type	CID
1	<input type="checkbox"/> Home		▲ ▼	10	Public	1	Component - Front Page	10
2	<input type="checkbox"/> 11:30 Choir		▲ ▼	11	Public	27	Component - DOCman	24
3	<input type="checkbox"/> Links		▲ ▼	12	Public	23	Component - Web Links	4
4	<input type="checkbox"/> Search		▲ ▼	13	Public	5	Component - Search	16
5	<input type="checkbox"/> Water Rescue		▲ ▼	14	Public	29	Link - Content Item	6

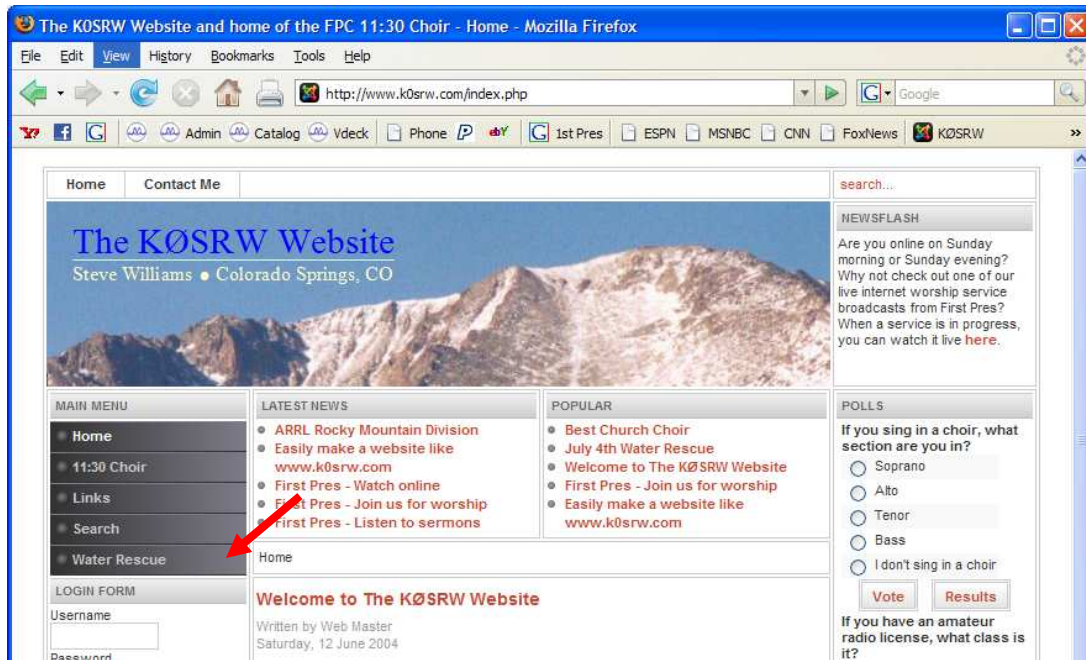
<< Start < Previous 1 Next > End >>

Display # 30 Results 1 - 5 of 5

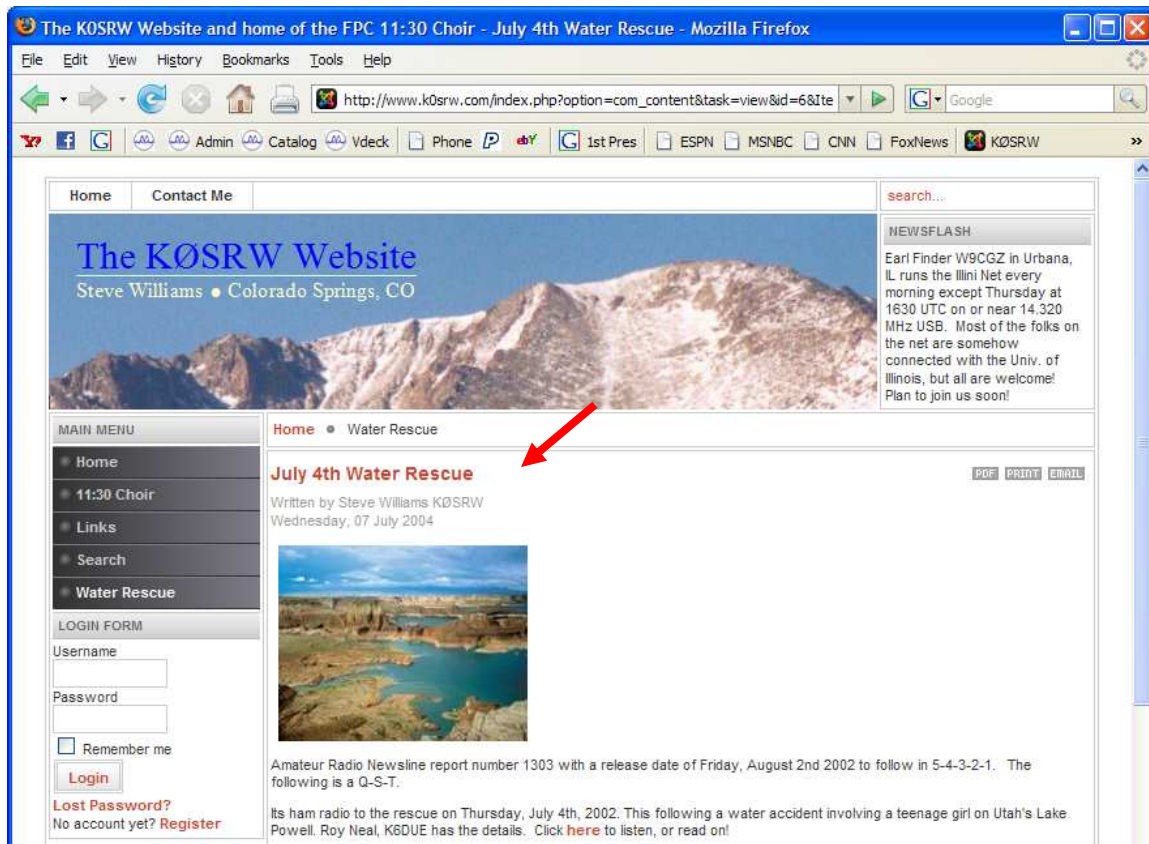
Joomla! is Free Software released under the GNU/GPL License.  
Joomla! 1.0.13 Stable [Sunglow] 21 July 2007 16:00 UTC  
[Check for latest Version](#)

Once you have the ordering you want, open a browser window, navigate to your site and check your results. You'll see your new button.





Click the new button and you'll go to the content that you linked to it.



Experiment with the rest of the Joomla Administrator at your convenience. We've only scratched the surface of its capabilities, but I hope this short tour has given you at least a feel for what can be done.

### **One more thing!**

I suspect that many readers are quite jealous of the beautiful graphic at the top of my site. Even if you're not jealous of it, you'll have to admit that it's a lot nicer than the default graphic you see when you first bring your site up.



The Joomla Administrator has no mechanism to change the graphic, so you'll have to create and upload a new one. Here's how...

Assuming that you're still using the default website template, which results in a site that looks a lot like mine, to use an FTP tool to download the graphics file **templates/rhuk\_solarflare\_ii/images/header\_short.jpg** to your computer.

Open the file in a graphics editor, such as Microsoft Paint. It will initially look like this:



Adjust the image or create a whole new one. Take note of the image X and Y dimensions though before you start working on your own graphic. To keep things simple, you'll want your new image to be exactly 635 pixels wide by 150 pixels high.

Once your new image is ready, save it as a JPG file named **header\_short.jpg** then FTP the new file back into your site's **templates/rhuk\_solarflare\_ii/images** directory. Point your browser to your site (<http://www.yoursitename.com>) and your new picture will show.

## **Have Fun**

Have fun with your new site development capabilities and do some experimenting. If you get into trouble, try the ever-present help system available within the Joomla Administrator:



Keep in mind that since there are thousands of Joomla users you can Google for almost any issue you might run into. More than likely, someone has encountered the same problem or has had the same question. Take a look at the Joomla references listed in Part One. If you're really stuck, drop me an email at [k0srw@earthlink.net](mailto:k0srw@earthlink.net) and I'll try to point you in the right direction. I can't respond to lots of inquiries, but, again, I'll help as much as I can.

## **Next Month**

Next month, we'll look at how to extend the capability of your site beyond what Joomla offers in its baseline functionality.

Until next month,

73,  
*Steve Williams KØSRW*