



**Chapter 24, Inc.
Madison, Wisconsin**

Society of Broadcast Engineers

October 2001



TOWER INDUSTRY PART 10 – ASSESSING MAINTENANCE NEEDS

By Vicki W. Kipp

The truism “take care of your things and they will last a long time” applies to towers as well as personal possessions. Taking care of your tower is a multi-step process that involves first performing an inspection of the tower, then completing the needed repairs.

For several important reasons, you should examine your tower regularly. First, you want to resolve problems that could cause injury to site visitors, site personnel, and tower technicians. Inspection and maintenance can prevent problems that might lead to tower collapse, as well as preventing damage to tower appurtenances. A conscientious tower inspection and maintenance program will enable your tower to last as long as possible.

INSPECTION

Once every twelve months is the recommended frequency for inspecting your tower. In fact, many tower insurance policies require an annual inspection. The inspection should at a minimum meet – and ideally should exceed – the ANSI/EIA/TIA 222F standard checklist for inspection.

When you construct a new guyed tower, it should be inspected one year later for physical changes experienced during its first year. Slight shifts in the earth and stretching of the guy wire will decrease guy wire tension and change the plumb (straightness) of the tower.

Several specific occurrences necessitate a fresh inspection of the tower. Addition of a dish, antenna, or other load to your tower should prompt you to analyze and re-inspect tower loading. If the Voltage Standing Wave Ratio (VSWR) reading for a transmit antenna changes, if you begin using more

(continued on page 4)

Next Meeting:

**Wednesday,
October 10, 2001**

Regional SBE Meeting and Broadcasters Clinic

Reception at 6:00 PM

**Meeting and Program
at 7:00 PM**

**at Marriott West,
1313 John Q.
Hammond Dr.**

In This Issue:

Minutes	page 2
Amateur Radio News ...	page 3
FCC Rulemakings	page 7
SBE Loses Friend	page 8
SBE Short Circuits	page 9

SBE FUND FOR WTC BROADCASTER VICTIMS

The SBE has started a fund for the families of six transmitter engineers who are missing in the World Trade Center disaster. The engineers are Ron Coppola, WNET; Donald Di Franco, WABC; Steven Jacobson, WPIX; Bob Pattison and Isaias Rivera, WCBS and William Steckman, WNBC. Anyone wishing to donate should make checks out to **Ennes Educational Foundation Trust Fund** and mail them to :

SBE
9247 North Meridian Street, Suite 305
Indianapolis, In 46260
Attention: Broadcast Engineer Relief Fund

FM AUCTION DELAYED

By Tom Smith

The FCC has delayed the auction of vacant FM channels that was to start on December 5, 2001. The delay is due to a court ruling that non-commercial applicants did not have to participate in auctions when applying for channels located in the commercial part of the band. Non-commercial applicants were already exempt from having to bid on licenses for new station in the non-commercial part of the FM band, and the court carried that exemption to the commercial band. In an article in Broadcasting and Cable there was comment that non-commercial applicants would apply and win most, if not all the new licenses by default because they did not have to bid for them. This could deprive the FCC of a large amount of auction proceeds. There were over 350 licenses available.

From FCC Press Release and Broadcasting and Cable

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September Business Meeting Minutes

Chapter 24 of the Society of Broadcast Engineers met on Wednesday, September 19, 2001 at the studios of Midwest Family Broadcasting in Madison, Wisconsin for the chapter's monthly meeting. There were 15 members in attendance, 12 of whom were certified, and no guests.

The meeting was called to order at 7:03 PM by chairman Tom Smith. Minutes of the August meeting as published in the newsletter were approved. Treasurer Stan Scharch was absent. Tom Smith reported for Stan that the chapter's bank balance was in the black.

Denise Maney of the Program Committee was absent. Fred Sperry reported on upcoming programs. On October 10th the program will be held at the Broadcasters Clinic. For November, Harris will present a program on in-band on-channel (IBOC) digital radio. The meeting date was moved to November 27th to accommodate the program.

Sustaining membership chair Fred Sperry reported that Graybar has become a new sustaining member. Renewals included Token Creek Mobile Television, WMSN, and CTI. Membership chair Paul Stoffel was absent.

Certification chair Jim Hermanson reported that the next local exam session will be held November 9-19, with a registration deadline of September 28.

Lonnie Cooks introduced himself as the new Special Events Coordinator.

Frequency Coordinator Tom Smith reported that he helped ESPN coordinate frequencies at the second UW football game against Fresno State. He is also working with the UW athletic department to determine interference possibilities with the Coach-Com system on away games.

National Liaison Leonard Charles was absent. Tom Smith reported that the SBE National meeting has been rescheduled to November 27-28. New national officers took office September 12th. At least six broadcast engineers were at the World Trade Center disaster on September 11th and are still reported missing. SBE National has started a fund for their families. Details at www.sbe.org.

Newsletter editor Mike Norton announced the deadline for articles for the October issue will be due at midnight, Friday, September 28th. The folding party will be held Wednesday, October 3rd at WKOW-TV.

In old business, Tom Smith announced that the Wednesday evening program at the Broadcasters Clinic will be a panel discussion on DTU.

(continued on next page)

Meeting Minutes (continued)

In new business, there was discussion on the FCC's suspension of EAS tests through October 2nd. Snell and Wilcox will hold a demonstration of format converters, noise reduction units, and upconverters on September 25th at the WHA-TV studios at Vilas Hall. Eric Lindstrom of Digital Images is organizing the demo. Paul Stoffel has information at 263-2175.

Lonnie Cooks reported that SBE would like to have a booth at the Broadcasters Clinic and has banners for it. He will call WBA to reserve a display location.

In professional announcements, it was reported that the web server at WISC-TV that hosts the sbe24.org site is down to an internet worm, but should be back shortly.

The meeting adjourned at 7:19 PM.

For this month's program, John Bauer and Roy Simmons gave a tour of the Mid-West Family Broadcast Group stations.

Submitted by Tom Weeden, Secretary

Chapter 24 hams: are you interested in trying an occasional local on-the-air meeting, either on HF or VHF? Send your ideas to wj9h@arrl.net.

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AMATEUR RADIO NEWS

By Tom Weeden, WJ9H

- Amateur radio volunteers answered the call to assist in ongoing relief and recovery operations in New York City, Washington, DC, and western Pennsylvania in the wake of terrorist attacks on the US September 11. New York City-Long Island Section Emergency Coordinator Tom Carrubba, KA2D, reports that hams have been supporting emergency officials and the American Red Cross relief and recovery effort. Amateurs have been staffing several Red Cross shelters in addition to a staging/National Disaster Medical System center, various Red Cross units, and the Greater New York City American Red Cross Headquarters as well as the New York City Office of Emergency Management.

At least four Amateur Radio operators are among the many still missing in the aftermath of the September 11 attack on the World Trade Center in New York City. The hams reported missing so far include:

Steve Jacobson, N2SJ, 53, of New York City, a transmitter engineer for WPIX-TV.

Bill Steckman, WA2ACW, of W. Hempstead, New York, a transmitter engineer for WNBC-TV. He was well known in the NYC area and ran a number of repeaters from the World Trade Center, most notably the 434 MHz ATV repeater.

Bob Cirri Sr, KA2OTD, 39, from Nutley, New Jersey. A Port Authority police officer, Cirri was on the job helping to evacuate workers from the building when it collapsed.

Michael G. Jacobs, AA1GO, 54, from Danbury, Connecticut. Jacobs worked at Fiduciary Trust Company International, which had offices in the World Trade Center.

- On September 18th, the American Radio Relay League took Amateur Radio's message directly to FCC Headquarters in Washington, DC. ARRL President Jim Haynie, W5JBP, said the idea behind the ARRL's "Amateur Radio Demo and Education Day" was to foster a positive view of the Amateur Service—especially with three new commissioners on board who may not be familiar with ham radio and the issues it faces.

The "demo" part of the event included a fully operational HF amateur radio station, which was used to make several contacts, a selection of low-profile antennas, a PSK31 setup, and a software-defined radio designed and built by Bob Larkin, W7PUA. The event gave Haynie the chance to chat at length about amateur radio issues with FCC Chairman Michael Powell, commissioners Kathleen Abernathy, Michael Copps, and Kevin Martin, and key FCC staffers.

Chairman Powell spent considerable time examining every display and asked for a personal demonstration of the PSK31 equipment. He was also interested in amateur radio involvement in rescue efforts at the World Trade Center and Pentagon disaster sites and how the Amateur Radio Emergency Service operates. ARRL General Counsel Chris Imlay said he was pleased to see that people did not just "cruise through" but stayed to discuss various issues and topics. Imlay said the event set the stage for future productive discussions with the FCC on a number of important amateur radio issues.

(Excerpts from "The ARRL Letter")

TOWER INDUSTRY PART 10 (continued from page 1)

nitrogen or dry air in your transmission lines, or if you hear tower coaxial lines slapping in the wind, it is time to do a tower inspection. If the tower is exposed to a damaging weather event such as a strong windstorm, a tornado, or a heavy ice storm, the tower should be inspected for damage.

TOWER GROUNDS

If the tower has an entrance gate to block trespassers, that should be inspected first. While you're at the entrance, check to make sure all appropriate signage is displayed. For example, you should have a FCC RF License sign designating the tower owner and the FCC registration number. Perhaps you have a "No Trespassing" sign. Some towers have hazard signs such as "Watch for Falling Ice" or "Electrical Hazard."

FENCING

Inspect the fencing around each of the guy anchors and the base of the towers. If a fence is sagging, damaged, or plagued by an overgrowth of vegetation, note the deficiency so it can be corrected. For an AM tower, the owner is required to keep an effective, locked fence around the antenna to protect people from touching the electrically hot antenna/tower. You may wish to mark the guy anchor and surrounding fence with bright paint to alert heavy vehicles to its presence.

FOUNDATION

Check the tower foundation for damage. If a foundation is unable to handle the tower load or if the soil underneath the foundation is weakening, the foundation can be reinforced by widening the area where the foundation bears against the soil.

AMINSULATOR

For an AM tower that sits on an insulator, the insulator should be inspected for damage and cleaned to remove any conductive coating. Also, keep the tower base free from plant growth, as it can become a fire hazard when the AM antenna transmits at high power.

STEEL

The steel tower itself should be an integral concern during any tower inspection. Steel towers are usually galvanized to resist rust, but are still susceptible to rusting. Any visible rust should be scrubbed off the tower structural members with a wire brush, and then these areas should be coated with spot paint or liquid galvanizing. If the tower is painted orange, white, blue, or black, then the galvanizing (once dried) should be painted over with the same color.

Internal rusting can be a huge problem for monopoles and towers with hollow legs. A tower structure may look stable from the outside, but actually be rotting from the inside out. Hollow tower elements have drain holes – called weep holes – which allow moisture to exit. These drain holes can become clogged by debris, trapping moisture inside and causing corrosion.

STRUCTURE

To assure that a tower is likely to remain vertical and that it is safe to climb on, you should visually inspect the structure before ascending. Using a pair of binoculars, scan up and down the tower looking for missing bolts. This search will be easier if the riggers put the bolts in upside down when assembling the tower. The benefit of

installing the bolts upside down in the tower is that gravity will cause the upside down bolt to fall to the ground if the nut comes off. If this happens, an open hole with sky showing through it will clue you in to the missing bolt. If the bolts were installed right side up, it will be more difficult to notice if any of the bolts have lost their nuts.

The plumb of a tower needs to be observed. If a tower isn't plumb, it could be because some guy wires are too taut or too slack. It is possible for a tower to have improper guy wire tension and still be plumb. Simple observation may show you if the guy wires sag, and whether or not they sag consistently at the tower and anchor ends. A measurement of the tension of each guy wire needs to be taken. Using the shunt-type dynamometer, transit intercept method, vibration method, or the tension dynamometer method, determine the numerical tension value for each guy wire. Compare your results with the original measurements for the tower. If the values are different, adjust the tension of the guy wires back to the original value. If guy wire tension is incorrect, the tower may not be able to withstand as high of wind loads as it was designed for.

COW FACTOR

An industry veteran advises that you check each guy wire near where it meets the anchor for wear and tear, particularly if any farm animals are pastured in the tower field. The reason for this is that some animals like to rub their backs against the guy wire. Although the wire does not wear down immediately, it can be substantially affected by if animals continue this behavior for eight to ten years. Although this phenomenon may be referred to as the "cow factor" in Wisconsin, it can

(continued on next page)



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TOWER INDUSTRY PART 10 (continued)

also apply to wildlife wherever a tower happens to be located.

TURNBUCKLES

On a tower, a turnbuckle is a piece of hardware near the anchor (Figure 1) that connects to guy wire at both ends such that when it is turned, it takes in or releases both wires uniformly. While inspecting the turnbuckle for corrosion, make sure that the turnbuckles aren't chafing other hardware. All turnbuckles attached to an anchor should have a comparable number of threads for take up and let out. Spray used and exposed turnbuckle threads with cold Galvanizing to protect them from rust. While you're looking at the turnbuckle, take a moment to examine the safety wire. If you should find that the safety wire has become welded to the turnbuckle, this is a sign of a grounding system problem. Since you're at the anchor, take a look at the preform and



Figure 1. For a guyed tower, each anchor needs to be inspected.

preform grip – the dead end grip that holds the guy wire. Inspect the thimble – a ridged component that keeps the end of a guy wire from closing and maintains a uniform curve – and shackles also.

ANCHORS

Prior to inspection, the ground surrounding each guy anchor should be cleared of weeds. In fact, it is best to keep this area clear of vegetation at all times. Plants hold water in against the anchor, leading to corrosion. Applying commercial vegetation killer or soil sterilizer is an effective long-term method to eradicate weeds.

Examine the concrete anchor for cracking or chipping. Check for sinking or upward movement of the anchors or tower by using the line where the concrete anchor meets the earth as a reference. Next, dig away a few inches of soil to inspect the anchor below ground for corrosion.

PAINTING

If the tower is painted international orange and maritime white, compare the tower's current shades to a FCC color tolerance chart to see if repainting is needed. Make sure to check the paint condition at the top of the tower where it is more affected by environmental forces.

GROUNDING

When lightning strikes a tower, grounding components give limited control of where energy will go by guiding the electrical surge to pass through a conductor to the ground. Lightning strikes can take a toll on tower grounding components. Thus, it is necessary to inspect the ground halo and grounding connections at all

locations including the tower legs, anchor heads, site buildings, and the top, bottom, and building entrance for each transmission line run. To keep your grounding system functioning efficiently, inspect all grounding connects to make sure that they are still intact and properly positioned. Bent ground wire is easily straightened. Check for corrosion, breaks, or deterioration. Corroded ground wire can be repaired by wire brushing corrosion off and then spraying the clean copper with a zinc chromate primer.

ON TO THE TOWER

Before climbing on the tower, you should check the climbing pegs to make sure that they are inserted firmly, and will support your weight. Likewise, you should make sure that the ladder is free of rust and securely attached to the tower.

ELEVATOR

Being exposed to the elements can cause tower elevators to have control circuit problems. Before taking a ride in the elevator, verify that the hoisting equipment is working, the control circuits function reliably without operator intervention, and the emergency braking system runs freely.

TRANSMISSION LINE

Transmission line allows the signal to travel from the transmitter, up the tower, to the transmit antenna. Every inch of line needs to be visually checked for dents, leaks, bullet holes, lightning damage, ice damage, and hot spots.

Many transmission lines are pressurized by gas to keep contaminants and moisture out. If there

(continued on page 6)

Panasonic

Panasonic Broadcast & Television Systems Company
A Division of Matsushita Electric Corporation of America

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Steve Paugh is the editor for the HTML Version of this Newsletter, available monthly on the SBE Chapter 24 web page.



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TOWER INDUSTRY PART 10 (conclusion)

is a change in logged usage of gas or compressor operation, the transmission line may have a leak. When inspecting transmission lines, check the line pressure. Leaks are not always easily found by inspecting the line, but can sometimes be located through TDR testing.

Faulty connections or line damage cause transmission line hot spots. Flanges and elbows are especially vulnerable to having problems that cause hot spots. Hot spots become apparent before problems begin affecting VSWR. If transmission line problems go undetected, they can result in arc-over or burnout of the transmission line.

VERTICAL RUNS

When inspecting vertical runs of transmission line, the key is to ensure that proper hardware placed at adequate intervals is used to keep the transmission line securely attached to the transmission line ladder. As a general rule, there should be a hanger installed for every three feet of transmission line. When used correctly, hardware such as hoisting grips, cable supports and spring hangers prevent suspended sections of transmission line from stretching. At higher tower altitudes, lines may need a greater attachment frequency due to high winds.

LINESWEEPING

Using test instruments such as a Time Domain Reflectometer (TDR) or a Frequency Domain Reflectometer (FDR), transmission lines can be tested for faults such as impedance discontinuity and poor connections. TDRs and FDRs identify the Distance To Fault (DTF). The TDR is used to test coaxial cable, while the FDR is used to

test wave-guide. The TDR computes conductor opens or shorts by transmitting pulsed DC signals into the transmission line and then analyzing the reflected pulses. The FDR transmits a swept frequency RF signal into the line to check for transmission line and antenna problems.

LIGHTS

Start by visually confirming that all of the tower lights are functioning. Check that the photo control senses daylight levels to successfully turn the tower beacons and sidelights on at night and off at dawn. Verify that your high intensity white strobe lights do not exceed the FAA peak light intensity of 270,000 candelas during the day, 20,000 candelas at twilight, and 2,000 candelas at night. Ensure that the flash rate control for the beacons is timed for the proper number of flashes per minute. Simulate a tower light failure to demonstrate that the automated alarm system detects the failure and sends an alarm. Physically inspect the safety chains, fasteners, vent holes, light lenses, liners, fixture gaskets, junction boxes, conduit runs, and visible wiring for damage.

ICEBRIDGE

An ice bridge (Figure 2) is a metal grate mounted over an antenna, microwave dish, or transmission line with the purpose of shielding these items from falling ice and debris. Verify that the ice bridge cover is intact and positioned correctly, and that the hangers are holding the bridge in place tightly.

ANTENNA

The antenna, probably the most important piece of hardware attached to the tower, needs to be inspected for weather damage. Antenna mounts

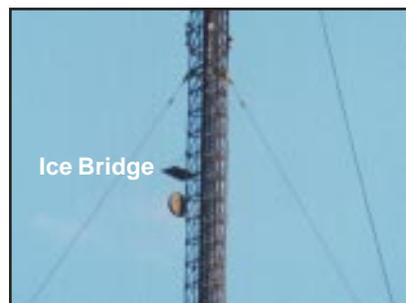


Figure 2. Ice Bridge protects the microwave dish below it.

should be inspected. The weatherproofing that covers all antenna connections should be inspected and reapplied if necessary.

MAINTENANCE

Upon completion of a tower inspection, document what repairs are needed. Plan for completion of those repairs. Next month, we'll continue our discussion of the tower industry.

Information for this article came from the following sources: BE Radio, John Battison "Care of Transmission Lines"; Broadcast Engineering, BE Radio, Kirk Harnack "Tower Maintenance"; Broadcast Engineering, Don Markley "Preparing Towers for Winter"; ComTrain Basic Tower Technology, Winton W. Wilcox; Wireless Review, Betsy Harter, "Ready for Inspection".

SBE NATIONAL MEETING DATES MOVED

Because of the events of September 11th, the SBE National Meeting and the Central New York SBE Regional Convention has been moved to Tuesday and Wednesday, November 27-28 at the Turning Stone Casino Resort in Verona, NY.

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FCC Rulemakings

Compiled By Tom Smith

PROPOSED RULEMAKINGS

CS Docket No. 98-82; Implementation of Section 11 of the Cable Consumer Protection and Competition of 1992, CS Docket No. 96-85; Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996, MM Docket No. 92-264; The Commissions Cable Horizontal and Vertical Ownership Rules and Attribution Rules, MM Docket No. 94-150: Review of the Commission's Regulation Governing Attribution of Broadcast and Cable/MDS Interests, MM Docket No. 92-51; Review of the Commission's Regulations and Policies Affecting Investment in the Broadcast Industry, MM Docket No. 87-154; Re-examination of the Commissions Cross-Interest Policy

The FCC is seeking comment concerning ownership limits of those in the cable TV industry. Currently, one entity may own systems that pass 30% of the homes in the U.S. and may program up to 40% of the channels on systems that they own with programming that they produce. The FCC is under orders from a Federal Court to either come up with new limits or retain the current numbers. The FCC must be able to justify them for the Court.

In computing these limits, the FCC is concerned that cable companies may have too much of a life or death impact on program suppliers if the cable operators are allowed to increase above a 30% national reach. Also, cable companies could freeze out program suppliers from their systems, if the percentage of channels they program with their own programs is increased.

The FCC also wants to know what percentage of ownership or financial interest would make one to be considered an attributable owner. This rule allows Mutual funds and banks to invest in many systems without being

considered a managing owner and affecting ownership limits.

This notice was adopted on September 13, 2001 and released on September 21, 2001. The comment period will last 75 days from the time this Notice of Proposed Rulemaking is published in the FEDERAL REGISTER, with replies due 30 days after the comment period.

MM Docket No. 01-235; Cross-Ownership of Broadcast Stations and Newspapers, MM Docket No. 96-197

The FCC is asking for comment on changes to its rules that could allow for the joint ownership of broadcast stations and newspapers in the same market. In 1975, the FCC issued rules that prohibited the ownership of a newspaper and a broadcast station in the same community. Under these rules, some organizations were required to divest in one or the other and some were grandfathered. New combinations were not allowed without a waiver, and there have been 4 waivers.

The FCC is considering a number of options including allowing newspaper/broadcast combinations in communities that meet the "voice test," like used in allowing TV-radio combos and TV duologies. In these cases the FCC allows certain combinations, when there are a certain number of independent voices – in other words, the number of media owners exceeds a certain number. The number of voices sets a minimum level of owners to minimize media concentration and insure diversity.

The FCC also is asking about the impact of the Internet, cable, and DBS and the potential effect on the advertising marketplace and diversity of the media. Comments on whether geographics of the market with such things as coverage overlap is also requested. Information on the benefits of such combinations is requested, such as advantages of joint news operations and selling of advertising.

This notice was adopted on September 13, 2001 and released on September 20, 2001. Comments are due on December 3, 2001 and replies are due on January 7, 2002.

FINAL RULEMAKINGS

ET Docket No. 00-250; Amendment of Part 2 of the Commissions Rules to Allocate Spectrum Below 3 GHz For Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services Including Third Generation Wireless Systems, RM-9811; Amendment of the US Table of Allocations to Designate the 2500-2520 and 2670-2690 MHz Frequency Bands for Mobile-Satellite Service

In this action, the FCC went forward with one allocation and denied the other. The FCC allocated the 2500-2690 MHz band for advanced wireless systems such as third generation wireless. They denied a petition by the Satellite Industry Association for spectrum from 2500-2520 and 2670-2690 MHz.

The spectrum in the 2500-2690 MHz band is currently allocated to ITFS and MMDS video services and to a few two-way high speed wireless Internet services such as those run by Sprint. These services will not be required to move. The new wireless service will share the band with the ITFS and MMDS services. The concept seems to be that the wireless services would operate in these bands where there are no ITFS/MMDS providers or marketplace forces take over and the wireless providers would buy out the ITFS/MMDS providers. Current ITFS/MMDS systems would be able to provide the new services if they would like to.

Those opposing the action included ITFS/MMDS providers, Sprint, Nortel and Motorola. Motorola objected in part that there is not any third generation wireless on that band anywhere else in the world. Those for the changes included wireless providers Verizon, Cingular, and Ericsson, the wireless equipment manufacturer.

The notice was adopted on
(continued on page 8)

FCC Rulemakings (continued)

September 16, 2001 and released on September 24, 2001.

ET Docket No.00-17; Authorization and use of Software Defined Radios

The FCC has authorized a new class of equipment which is software configurable and which will have a streamlined authorization process.

A software defined radio is one that will be able to change its operating frequencies, type of modulation and power output by a change of software. While not fully explained in the notice, the software would either have to switch different pieces of hardware on and off or more likely use digital signal processing to make the different types of signals. Processing of FCC equipment certification should require less time because the radio would not have to be completely evaluated with each change.

The way these radios would be used is if you had a cell phone and a new service became available on a new band, the manufacturer could modify the unit with a new piece of software to allow the unit to operate on the new band. After the software update, your phone would be ready for the new service. These radios would be the ultimate in agile radios. In this notice, the FCC was concerned with transmitters only, the FCC said that receivers are covered under existing rules.

Two requirements the FCC put on these radios are that the manufacturers must put in place measures to prevent unauthorized changes, and that the sticker in the back of the unit can be replaced with data in the LCD display to give out all of the FCC certification numbers.

This action was adopted on September 13, 2001 and released on September 14, 2001.

MD Docket No. 00-205; Amendment of Parts 1, 21, 61, 73, 74 and 76 of the Commission's Rules, Adoption of the Mandatory FCC Registration Number

The FCC is now requiring the use of a FCC Registration Number (FRN) on all applications and payments to the FCC. The main propose of the number is to track payments with the applications. Each corporation must have a separate FRN for each part of the corporation that has its own Taxpayer Identification Number. A check of rules will assure that your applications and payments are processed properly. There are a number of ways that this number is used and these were discussed in the notice, which also should be read with the rules.

This notice was adopted on August 24, 2001 and released on August 31, 2001.

WT Docket No, 99-168; Service Rules for the 746-764 and 76-794 MHz Bands, and Revision to Part 27 of the Commission's Rules, CS Docket No. 98-126; Carriage of the transmissions of Digital Television Broadcast Stations, MM Docket No. 00-39; Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television

The FCC has issued some rules to make it easier for TV stations that currently have either an analog or digital allocation in the Channel 60-69 part of the TV band to give up that channel. The FCC would like to have these stations voluntarily give up these channels to make the band more attractive for bidders who would like to start new services in these bands. Currently these auctions are on hold due to the uncertainly of getting use of the spectrum currently used by television stations.

In this notice the FCC ruled that stations that gave up one of their channels in the channel 60-69 band could remain analog on the remaining TV channel until the DTV transition deadline of December 31, 2005 or when 70% of the market is able to receive DTV. They also can voluntarily negotiate with the new services for monetary payments to move from the band early. Note, some stations DTV allocations meet analog requirements and they are able to move the analog operation to the DTV channel.

This notice was adopted on September 7, 2001 and released on September 17, 2001.

Compiled from FCC Notices and Press releases (www.fcc.gov)

SBE LOSES A FRIEND AT FCC

By Tom Smith

Steve Linn, Deputy Chief of the Licensing and Technical Analysis Branch and acting Chief of the Personal Radio Section was killed in an auto accident in the morning of September 21st. His wife, Lesley also died in the accident. They were on their way to Virginia Beach for an ARRL convention, when the accident occurred. Their two children, ages 12 and 9 survived the accident and were not seriously hurt.

Steve was a friend to the SBE coordination effort and attended national meetings and would answer questions on the coordination list server. He was not just another faceless bureaucrat, but someone who tried to make the system work and a little more friendly. A fund for Steve's children is planned.



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Thanks to Fred Sperry for arranging the September program, and thanks to John Bauer and Roy Simmons for the tour of the Mid-West Family Radio studio facility.

SBE Short Circuits – October 2001

By John L. Poray, CAE
SBE Executive Director

SBE FALL REGIONAL CONVENTIONS

A number of SBE chapters present excellent regional conventions each year and many of them are happening soon. They provide a great opportunity to see equipment exhibits, attend technical paper presentations and meet with other broadcast engineers and members of SBE, all at a lower cost to you in time and money than attending the typical national show. Coming up:

October 9-11 – Broadcaster's Clinic & SBE Upper Midwest Regional Convention, Madison, WI. Call WBA at (800) 236-1922.

October 19 – SBE Chapter 9 Reg. Conv./Arizona Broadcasters Annual Convention, Phoenix, AZ. See www.broadcast.net/~sbe9.

October 24-25 – Electronic Equipment Expo, Chapter 16, Seattle, WA. See sbe16expo@home.com

October 31 – Pittsburgh Chapter 20

SBE Regional Convention, Monroeville, PA. Contact Tom Bills at tbills_us@yahoo.com.

November 28-28 – Central New York SBE Regional Convention & SBE National Meeting, Verona, NY. See sbe22@broadcast.net.

Also coming up ATSC DTV Standards Seminar, St. Louis, MO, October 23-24. To register, go to www.atsc.org. Co-sponsored by SBE.

CERTIFICATION EXAM SESSION DATES ANNOUNCED FOR 2002

The SBE National Certification Committee has announced exam session dates for 2002. Check the list below for the exam period that is best for you. For more information about SBE Certification, see your Chapter Certification Chair or contact Linda Godby, Certification Director at the SBE National Office at (317) 846-9000 or lgodby@sbe.org.

Questions and comments about SBE may be e-mailed directly to Executive Director, John Poray at jporay@sbe.org.

<u>Exam Dates</u>	<u>Location</u>	<u>Application Deadline</u>
November 9-19, 2001	Local Chapters	CLOSED
February 8-18, 2002	Local Chapters	December 28, 2001
April 9, 2002	NAB Convention	March 12, 2002
June 7-17, 2002	Local Chapters	April 27, 2002
August 16-26, 2002	Local Chapters	June 16, 2002
November 8-18, 2002	Local Chapters	September 29, 2002

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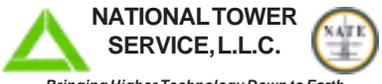


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FIRST CLASS MAIL

Newsletter edited on Pagemaker 5.0 by: Mike Norton
 Contributors this month: Vicki W. Kipp, Tom Smith, and Tom Weeden.
 Thanks to Leonard Charles for his work on the Chapter 24 WWW page.

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OCTOBER MEETING and PROGRAM



**Society of Broadcast Engineers
CHAPTER 24 MADISON, WISCONSIN
Wednesday, October 10, 2001**

Broadcasters Clinic and Upper Midwest Regional SBE Meeting

The October SBE meeting will include a panel discussion on the transition to DTV, with three Madison chief engineers discussing the trials of getting their DTV transmitters on the air. Also, representatives of the equipment suppliers will be discussing what is going on in the rest of the Midwest and the country. We will also discuss issues concerning both the FCC deadlines and promotion of DTV.

Reception at 6:00 PM

Meeting and Program at 7:00 PM

**at Marriott West
1313 John Q. Hammond Drive
Middleton, WI**

Visitors and guests are welcome at all of our SBE meetings!

2001/2002 UPCOMING MEETING/PROGRAM DATES:

Day	Date	Program
Tuesday	November 27	IBOC Digital Radio
Wednesday	December 19	UW Communication Expert
Thursday	January 17, 2002	Security Systems

Program Committee:	Denise Maney 277-8001	Steve Paugh 277-5139	Fred Sperry 264-9806	Steve Zimmerman 274-1234
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