

# Monitoring Times Celebrates 25 Years

1/1982 - 12/2006



**Bob, Judy and your devoted Art Director, Bill Grove at an early hamfest. Bringing a bit of country to the 'fest! I was selling Apple Cider out of the barrel next to me in the photo! The "shack" behind us was a collapsible display that we could assemble easily from convention to convention, made from real wood planks! -Bill**

dressing. Our intent is to populate the website with useful resources that stay valid over time, as we don't have the staff to manage daily updates.

On the other hand, we don't want to build up the website at the expense of the magazine that it supports. Therefore, there will be a password which will change monthly in order to access the bonus section of the website. The password will be printed somewhere within in EACH issue of *Monitoring Times*. Hopefully this will help ensure the restricted pages benefit those who actually buy the magazine, without penalizing those readers who buy their issues from the newsstand.

We look forward to continuing to grow and change with the times, in the traditional spirit of the radio hobby. Our feature article on Zenith radio is an eye-opener regarding the importance of amateur radio operators in the evolution of radio technology. Radio – wireless – is on the growing edge of technology just as much today as it was when the Zenith Transoceanic made its first experimental trip to the Arctic! Maybe more so, as technology finds more and more uses for electromagnetic waves from dc to daylight!

## Longwave Resources

✓ **Sounds of Longwave** CD or Audio Cassette (please specify) featuring WWVB, Omega, Whistlers, Beacons, European Broadcasters, and more!  
**\$13.95** postpaid

✓ **The BeaconFinder** A 65-page guide listing Frequency, ID and Location for hundreds of LF beacons and utility stations. Covers 0-530 kHz.  
**\$13.95** postpaid

**Kevin Carey**  
P.O. Box 56, W. Bloomfield, NY 14585



## NAME THE COVER STORY CONTEST!

What was the cover story for Volume 1 Issue 1 of *Monitoring Times*?

The Grand prize of a *LIFETIME* subscription to *Monitoring Times* will be awarded to one person whose name is drawn from those with the correct answer. All entries, whether correct or not, will be entered for the First\* and Second Prize drawings. Contest deadline: January 15, 2007

**Grand Prize:** Lifetime subscription to MT

**First Prize:** Kinetic Avionics SBS-1 Virtual Radar

**Second Prize:** MT Anthology on CD 1999-2005

Sorry: no email entries will be accepted. If you don't know the answer to the question, you can enter anyway. Send your entry in a letter or on a postcard, including your NAME, MAILING ADDRESS, and your EMAIL or PHONE number, to:

MT 25th Anniversary Contest  
7540 Hwy 64 West  
Brasstown, NC 28902

\* *Monitoring Times* is very grateful to ENIcomm for its generous gift. Please visit their site at [www.ENIcommunications.com](http://www.ENIcommunications.com)

At the end of December, *Monitoring Times* will have completed its 25th year of publication. In January 2007 we'll move into Volume 26. That's a mere infant compared to magazines like the venerable *National Geographic*, but it's not a bad accomplishment in the short life expectancy of hobby magazines. So we plan to celebrate!

In addition to our usual forward-looking articles, we plan to do some looking back during the coming year – interviewing long-time writers, reprinting significant stories from past editions, noting milestones, and running contests for loyal readers. We start out with an interview with our founder and publisher Bob Grove, together with a very revealing article about his early experiments with electricity! (He's also fascinated by fire ...)

You are also invited to enter our first contest as outlined in the sidebar. We are very grateful to Mark Phillips of ENIcommunications Corporation for donating the First Prize for this contest (a value of \$800). The company is currently the new US distributor for Kinetic Avionics products and for Jingtong amateur radio equipment, along with their other wide-ranging talents in telephonics, broadcast technology, and radio program production in their digital studio. Check out ENIcomm's website at [www.kineticavionics.us](http://www.kineticavionics.us) or visit them at 70 Brookside Road, Randolph, NJ 07869, or call (866) 500 SBS-1.

## Bonus Pages for MT Readers

As we look back, we are also looking forward. In 2007 we plan to inaugurate a special section of the *Monitoring Times* website just for our regular readers. We'd like to say "Thank you" to those of you who continue buying the magazine – whether as a subscriber or at the newsstand. We wouldn't be here without you, and we're always looking for ways to make our website a more helpful resource to you in your radio listening.

In the Bonus section we will be posting such items as an expanded glossary of radio terms and acronyms used in *MT*, additional audio file samples to download so you can identify digital modes from all those weird noises you hear on HF, Bob Grove's antenna book, additional articles from past *MTs*, and so forth. As time and talent allow, we hope to add podcasts of interviews with some of our writers and experiment with other creative uses of the internet combined with radio. Your suggestions are welcome, especially if you see a need no one else is adequately ad-



# A Visit with Bob Grove WJ8HD

## Publisher, Monitoring Times; Owner, Grove Enterprises

*In this issue of MT you have recounted some of your childhood electrical experiments and how you got your start in ham radio. Could you elaborate on your background in radio and journalism prior to creating Monitoring Times?*

Standing in front of a group of people and expounding on something began with a speech class in high school, where I first discovered I had a flair for writing. During college, I was Music Director and Quiz Host of our college radio station; I also earned a little money as an announcer/engineer for a commercial radio station. After I graduated, I became Public Affairs Director and an interviewer for an ABC TV/FM/AM affiliate broadcaster. Most of my writing has been allied with electronic topics, appearing in *Radio-Electronics*, *Envirosouth*, *CQ* and, of course, the *RCMA Journal*.

*You seem to have acquired a particular expertise in antennas – how did that come about?*

Ever since discovering at age 10 that a long string of wire attached to a crystal set could bring voices and music to a pair of earphones, antennas have fascinated me. When I finally got my ham radio license at 13 and couldn't afford to buy an antenna, that's when the experimenting really began. I've been doing it ever since.

*What was it that inspired you to publish the first issue of Monitoring Times 25 years ago?*

*MT* evolved from a regular supplement included with the early Grove Enterprises catalogs; our readers pled for more information, so we finally published the first issue of the only magazine that was exclusively designed for the monitoring hobby.

*What was the primary focus of the original publication? Has that focus changed over the years?*

Wide-spectrum reception of signals, from under the sea to land to space. If it emitted a signal, we covered it. We still do. While other magazines have copied our lead, we are still recognized as the leading authority on radio reception.

We've had a few changes in emphasis – for example, we greatly increased coverage of shortwave broadcasting when we incorporated Larry Miller's shortwave broadcast publication, *INTERNATIONAL RADIO* in June of 1986. The shortwave guide grid is a legacy from that publication and is still a major element in the magazine. On the other hand, we dabbled with publishing TVRO and weather satellite information, consumer electronics, and PCS, but those all went by the wayside. We may mention topics like those

occasionally, but they are not our mainstay.

*Do you think Monitoring Times fulfilled your hopes for it, and do you think it has a role to play in the years to come?*

Absolutely. We have watched our competitors come and go (and we even had to put one of our own publications – *Satellite Times* – to rest). *MT* has surpassed my hopes in some ways: we always had good writers, but I don't know if I ever envisioned keeping such a competent core of writing staff for this many years. *MT* owes its longevity to their high standards. We are also one of the few remaining outlets for free-lance authors wanting to write about shortwave radio and scanning.

With the advent of the Internet, similar information to that contained in *MT* became available at the tap of a key, but much of it was plagiarized from *MT*, or bogus, or outdated. On the other hand, we decided to use the internet to our advantage by creating our electronic publication, *MT Express*, which is quite successful and growing in popularity. As you'll be seeing, we plan to continue to use the Internet to make interviews, articles, and other resources available to our readers.

*Are there some high points in MT's history of which you are particularly proud?*

Definitely. We became the focus, along with Grove Enterprises as a dealer, of radio privacy issues during the cellular scanning issue a decade ago. *MT* and Grove were interviewed and quoted regularly on TV networks, radio broadcasts and newspaper issues.

When we published the *Federal Frequency Directory*, we learned that many of our nation's undercover agents were using it as a signals surveillance tool.

We were the first to expose the sources and locations of the mysterious spy numbers transmissions.

*MT* is considered a "must read" by federal intelligence agencies.

We were the first publication to publish confirmation of the *Stealth* aircraft as our adept listeners reported transmissions from their test flights.

We were the first radio print magazine to establish an on-line subscription, *MT Express*.

For seven years straight, *MT* and Grove Enterprises sponsored internationally-attended radio expositions in Knoxville and Atlanta, bringing in experts worldwide.

Our coverage of super-secret Area 51 communications was quite popular, and still inspires inquiries from radio listeners and the press.

Our authority and leading-edge reporting resulted in my being called to Washington to testify before Congress on cellular security issues, and my being confirmed as a court-approved expert on radio communications.

*What have you personally enjoyed the most about publishing MT?*

I've enjoyed the respect that *MT* has earned as the top publication in its field. If it's printed in *MT*, it has validity, and in those rare cases where we make a mistake, it's always corrected in the next available issue. Our leadership position has given me a personal opportunity to speak to many organizations and meet outstanding individuals in their fields. It has also given me a personal opportunity to meet hundreds of our readers over the years.

I recall one recent incident in which I had attended a symphony orchestra performance. During the intermission, I moved to the stage to congratulate some of the musicians, when two violinists came over and asked, "Aren't you Bob Grove?" I was flattered, of course, but proud that our magazine has such diverse outreach, and that Grove Enterprises is so well known.

*What new technologies excite you and how do you see them being incorporated into radio and MT in the future?*

Digital communications has greatly expanded radio's capabilities. While it looked for a while that this new technology might doom scanner monitoring, the recent adoption of publicly-available P-25 digitization as a national standard has guaranteed its future.

Trunking systems make radio traffic handling more efficient, and is now built into most scanners.

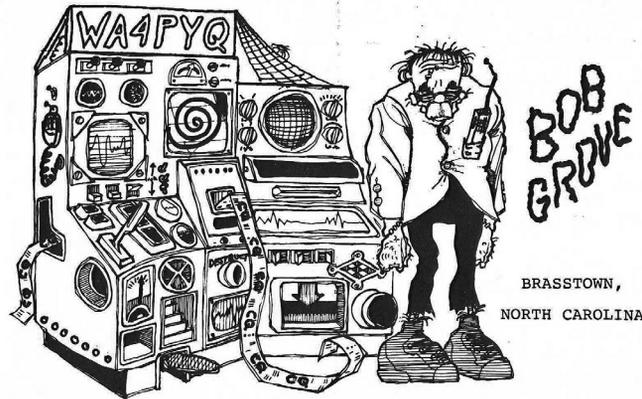
Component miniaturization allows superior performance and multiple functions in compact receivers.

DRM promises to improve shortwave reception.

Satellites beam down more and more communications and programming.

As these technologies enjoy growing implementation, and others are born, *MT* will be there. With a lively dialogue between writers and contributors, *MT* will continue to inform the public – and the profession – of equipment, techniques, frequencies and schedules.

But *MT* doesn't operate in a vacuum. As your radio world changes, let us know what answers you need. Let us know what answers you've found. It's been a great partnership for 25 years!



# Growing Up With Radio

by Bob Grove W8JHD

## An inquisitive youth

Some of us discover radio late in life, but radio, in one form or another, has been part of my life since my earliest childhood recollections.

As a very small child growing up in Cleveland, Ohio, I would reach up and press the buttons that energized the motor-driven dial of my grandparents' console, hypnotized by the moving needle and the humming motor as it searched for stations. English language shortwave programs were more common then, so the chance of hitting an active frequency that I could understand was pretty good.

My grandparents' house was an old Victorian style, and its many floors held a trove of treasures to be explored, with the dusty attic particularly appealing.

The temptation to dig through drawers and boxes became a childhood obsession; every week I could expand my exploratory horizons by venturing down the street, digging through the neighbors' trash cans before the rubbish collectors arrived.

Obsessed with the concept of treasures awaiting my discovery in trash cans, I would go rubbish picking (now known more euphemistically as "dumpster diving") on my way to school. Fearing that someone else might find my trove, I would hide the day's take beneath an old tree in a nearby woods, then anxiously await the dismissal bell to race back and recover my plunder.

One of those salvage missions took me behind an automotive shop where, among greasy, discarded bearings and dripping oil containers, I found a discarded Tungar bulb from an old battery charger. I immediately recognized it – it looked just like the powerful tube inside the robot's chest in one of the 25-cent, science-fiction, cliff-hanger serials that I used to attend every Saturday at the Homestead Theater! I was hooked.

That old tube was the premier exhibit in my dresser-drawer collection of jetsam and flotsam rescued from untold trashcans. I would take it to bed with me, sit and admire it, and jealously protect it. Then, one day, as Mom was trying to hurry me for school, the inevitable happened. I tossed my cap pistol into the drawer.... "POP!" I knew what had happened, but I agonizingly dragged myself to the drawer and looked in.

There – in the front of my drawer – was a pile of shiny, metal-coated, glass fragments – the disarrayed remains of my prized Tungar bulb! I was inconsolable, and a replacement for that tube was not to be found for several decades (and that one is still on display in my office)!

## The movies

I was a very impressionable youngster and

never lacked entertainment. My mother was a movie addict (and, at a spry 94 years of age, still is!), so there was hardly a Hollywood release that I didn't see. I recall one particular dance routine of Fred Astaire as he pirouetted about, alternatively thrusting his hands toward the stage, each time eliciting a flash of fire! Wow, could I do that? At the impressionable age of eight, I was sure I could.

Let's see... what could make those sparks? Of course – *spark plugs!* I could hardly contain myself with my self-congratulations for this sheer genius. I awoke often during that night, eager to race back to that automotive repair shop. Arriving there early the next morning, digging through the grease and grime, I emerged triumphant with a discarded plug! I can still see the looks on the faces of those crusty mechanics watching me as I whirled about, threw the spark plug to the ground with great anticipation, then staring in dismay when all it did was go "Thud!"

## My laboratory

When I was nine years old, we moved to a big, old farmhouse in suburban Rocky River; original, carbon-filament light bulbs were still in their sockets, and the dingy basement would become my laboratory.

My first Christmas there was highlighted by a Chem-Craft chemistry set. As I pored through the pages of the little experiment handbook, my eyes froze immediately on one entitled, "*A Safe Explosive.*" OK, that's a really good start, I thought.

This one involved saturating iodine crystals with ammonia. When this stuff dries out, even a speck of dust sets it off with a very loud bang. With great expectation, I put a soggy pile of the concoction on the basement floor to dry, not even thinking about where I'd put it – right in the pathway of where my mother would be carrying a load of clothes to the washing machine.

As I sat upstairs watching Super Circus on our new Dumont TV, mom was dutifully carrying that huge basket of clothes down the basement stairs, her mind a thousand miles away in thought. At the bottom of the stairs, she turned and took a step toward the washing machine. "*BLAM!*"

Words can't begin to describe the next few minutes as I tried to explain my innocence while helping my mother pick up clothes from all over the basement. I was strongly encouraged not to try that experiment again.

Apparently other mothers had similar experiences with their young scientists – future reprints of that little manual had a blank page where there used to be instructions for "*A Safe Explosive.*"

## Next: electricity!

It was only natural that my curiosity should evolve through the mysteries of electricity, and while my electrical experiments were not hazardous to other people, they were to me. AC/DC tube radios, with their "hot chassis" always gave me a buzz when I touched them as I stood on the damp basement floor.

Dr. Frankenstein was my mentor. His famous laboratory with lightning flashing from every direction was awe inspiring. I had to have this.

I acquired an old, Model T ignition coil and soldered a pair of stiff, parallel wires to the contacts. I actually made a Jacob's ladder. The sparks were small as they slowly ascended, but they were sparks! Further experimentation with this fiendish device left a macabre pile of electrocuted weeds and bugs, and usually left me with a share of painful electric shocks as well.

Did you know that you can cook a hot dog in a moving vehicle? All you need is a DC/AC power inverter, a plug, some wire and, of course, the wiener. I tried this on a trip to Florida during a school break with my Cousin Steve.

I stuck the wires in opposite ends of the wiener, turned on the inverter and, in a matter of seconds, the 120 volts split the steaming wiener. But when I attempted to retrieve the weenie while the inverter was still on, it darned near cooked me as well! It would be several years before I heard the admonition from experienced hams to keep one hand in my pocket while poking inside high-voltage equipment.

## And finally: Radio!

Since I was something of a geek, I often went to the library after school. There I discovered some ancient books about radio. I pored over these old, tattered documents and their photos, firmly convinced that the modern approach to radio communications was to mount the sockets for bulbous vacuum tubes on a breadboard, and wind coils out of copper tubing. Even better, these relics resembled the contraptions I'd seen used by my long-time movie hero, Dr. Frankenstein!

Fortunately, I was rescued from this misconception by an elderly gentleman who, it turned out, had been watching me cruising by the radio book shelf. He cautioned me that radio had progressed further than that, and he lived nearby if I'd like to see *real* radio communications equipment. Thus began an enduring friendship with my new mentor, Dave Crossley, W8BCO.

Dave had built most of his own gear, and admittedly, some of it was on breadboards. But he taught me about radios, electronic theory, and how

# WN8JHD

21605 CENTER RIDGE RD.  
ROCKY RIVER, OHIO

Radio \_\_\_\_\_ Confirming Qso of \_\_\_\_\_  
at \_\_\_\_\_ EST \_\_\_\_\_ Mc. Ur Sigs Rst \_\_\_\_\_  
TRANS. \_\_\_\_\_ Rcvr. \_\_\_\_\_  
73's, Bob Grove

to learn the Morse code. Yes, I was ham-radio bound at 13 years of age.

After memorizing the code, I went to the Cleveland Public Library where the FCC tests were then administered. It was 1951 and the newly-approved Novice Class license was available to encourage entry-level amateurs. The code test, supposed to be an easy 5 words per minute, must have been at least 150! The dots and dashes echoed through the room as I desperately tried to remember what they meant. I flunked; and a few weeks later, I flunked again. But three was a charm, and I finally earned my Novice call, WN8JHD.

Dave loaned me his crystal-controlled, bread-board transmitter with its plug-in coils, and an old National FB-7 receiver; I put up a random-wire antenna.

## Nature's pyrotechnics

I remember waking up early one stormy morning to the sound of a loud "crack" every time the lightning discharged outside my window. Giving it little thought, I went over to the window and sat down on the carpeted floor to watch the fireworks.

Still, there was that persistent, loud "crack," synchronized with each lightning flash, and it seemed louder now. My eyes traced the antenna and ground leads from the window, down the sill, and under the carpet to the rig. I had unraveled the mystery: the lightning was jumping from the antenna lead to the ground wire, right where I was sitting, between my left and right buttocks!

## On the air

It may seem incredible that I had survived my childhood so far, but I was actually ready to go on the air! Needless to say, Dave was my first contact. The world was literally at my fingertips as I tapped out the rhythmic Morse on the airwaves, communicating with other hams around the world; Germany, Italy, Russia, Japan – it was a magical time. One might assume that I had finally graduated from a fumbling youngster to an adept ham. But you'd be wrong.

In my manic state of overconfidence, I decided it was time to build my own transmitter. I had saved my allowance money and had purchased a chassis, front panel, and components for a 6AG7-6L6 rig. Surplus and salvage companies overflowed with World War II electronics. Components – and even some equipment – were available for 25 cents a pound. I made the tube-socket holes with my shiny Greenlee punches, and put my soldering iron on the stove to heat it up. Yes, sir, I was in business now.

As the soldering iron started heating up in the gas-stove flame, I began the long process of meticulously attaching the wires, capacitors, resistors and coils. Then the final touch: Melt the solder to secure the connections. It was then that I learned a very important lesson: Always use rosin-core solder

for electronic work; the acid-core solder now in my hand should be reserved for repairing cracks in automobile radiators.

The smelly, caustic, smoky, acid-core solder was doing its thing – sticking the parts together, but corroding the whole works at the same time! In what seemed like mere minutes after completing the assembly, I could see rust beginning to form everywhere.

It was a long drive to Dave's house, but I, with tears in my eyes, presented the clump of rust to him. Dave shook his head, but offered some encouragement: He actually thought it could be salvaged! As a matter of fact, within a couple of hours, he had it on the air! I was not only appreciative, I was astounded.

## Another, more painful lesson

Dave worked for National Carbon Company, so getting batteries was no big deal. I needed about 90 volts to power up an old radio that I had found somewhere, and Dave came through. I was sure it was a good battery, but I wanted to check it anyhow.

I didn't have a voltmeter, but I had been shown by another ham how to check a flashlight battery by putting my tongue on the positive terminal and touching the base with my finger to complete the circuit. Sure, this was how I could check the 90-volt battery.

YEOW! A brilliant flash illuminated my eyeballs as my tongue retreated, attempting to curl up in the back of my throat like a window shade!

As I peeled myself off the wall on the other side of the room, still dazed by that white flash, I realized that there's a big difference between 1-1/2 and 90 volts! Another lesson learned. Clearly, it was time to invest in a test meter while I was still alive, and my tongue could still help me place the order!

## My first multimeter

A birthday trip to an electronics store was rewarded with a multimeter. It was an expensive trip for me, liquidating my entire \$14.95 allowance savings, but now I could measure voltage, current and resistance all with one instrument! Fantastic! I brought the little meter home, went into my radio room, and expectantly began testing everything I could poke the prods into. I quickly learned another painful lesson: There are *lots* of milliamps in a wall socket!

The loud "bang" was accompanied by little bits of resistors showering out of the case, accompanied by sparks and a puff of smoke. It was quite a display, but there was no question about it – I had *really* gone and done it now!

Trying to return the meter to the store by telling the salesman that it seemed to be defective proved to be predictably futile; I think the salesman noticed some residual smoke wafting from the meter case, and probably heard the rattling noise inside and saw the curled shape of the needle on the meter as well. Dejected, I returned home with my bag-full of destruction.

But Dave – bless his heart – came to the rescue again: He showed me how to build a volt-ohm-milliammeter (VOM) myself. This time I used a wood-burning tool as a temperature-controlled soldering iron, and I even had enough sense to use rosin-core solder. Yes, the meter worked; and no, I didn't try to

see how many milliamps were in that wall socket!

## Going mobile

By the time I was in my mid-teens, I had my own car ... it was *mobile* time! During those days, only hams and police cars had long whip antennas. I recall pulling up to a traffic light and seeing another ham alongside; we spent some considerable time with a car-horn QSO before the light changed, much to the obvious annoyance of other motorists who were clearly not hams.

With my ELMAC AF54 transmitter, Gonset Tri-Band converter and Master all-band antenna, I communicated with everyone I heard – worldwide!

During one local, 10-meter QSO, my contact, who was also a mobile station on the other side of town, reported: "Hey, there's another mobile and he's got his call on the door." He pulled up closer – "It's P-O-1-I-C-E!"

I spent a good deal of time cruising the electronics shops; I even found a place that would give me the innards from old juke boxes. And there was a shoe store that let me take the high-voltage transformer out of an old shoe-fitting fluoroscope – the kind you could look into and see the bones in your feet when you tried on a new pair of shoes.

I was in ham heaven. I brought the husky transformer home, with visions of a climbing-spark Jacob's ladder dancing in my head.

Hooking the husky, high-voltage wires to a vertical pair of coat-hanger wires, and separating them by about four inches at the bottom and flaring them out to about one foot at the top, I was ready.

Holding my breath expectantly, I plugged the transformer into the wall. The house lights dimmed as an arc of fire started at the bottom, emitting an audible "ZZZZHHHHHH" as it slowly danced upward between the electrodes, expanding to an enormous foot across at the top before it finally extinguished. My jaw dropped; I was jubilant. I had created my own Frankenstein's laboratory! I was also out one monstrous transformer which I could smell cooking before me.

## An appreciative look back

My senses were overwhelmed by our enticing hobby back then. I can still see the warm glow of vacuum-tube filaments in a night-filled room, and the pulsating, blue radiance from mercury-vapor rectifiers. I can smell the waxy, dusty aroma from resistors and capacitors in a hot chassis, and the poignant, metallic smell from a broken vacuum tube. But I'd rather forget the rank odor released from the spongy inside of a Mallory power-supply vibrator, and the acrid nasal assault from a blown selenium rectifier (Whew! What did I step in?).

But most of all, I shall never forget the patient kindness of ham radio's "Elmers" like Dave Crossley, W8BCO, whose key is now silent, and the meticulous, on-air practices taught to me by Tom Tabler, W8WZH ("When you announce your call, you say 'This is, not here is...'").

Those smells, sights, sounds, tastes, friendships and lessons will never be forgotten. They are part of my being. They paved the way for a series of careers that have included teaching, technology and journalism, all inspired by those early, unforgettable life experiences.