

WalkAmerica set for this month

changes in route this year



The annual March of Dimes WalkAmerica will be held on Sunday, April 24th. Walkers will start from Washington Park beginning at 9AM.

WACOM, will again provide communications for the event. This is one of the more active public service events that Amateur radio operators

are associated with in Washington County.

This is a perfect opportunity for new hams as well as regulars to participate. No experience is required. Contact Walt Piroth, N3BKW if you would like to be involved.

(See map insert in newsletter.)

Club buys new HF transceiver

WACOM's newest piece of ham gear is a Yaesu FT-890 HF transceiver. The rig is a 100 watt 160-10M all mode transceiver with a 100KHz-30MHz receiver. The unit has a built in high speed automatic antenna tuner with 31 memories that can automatically store most recent antenna matching settings for instant recall while changing frequencies; two independent A/B VFO's for each band (20 total); a total of 84 independent sets of frequency, mode and other selections. See page 7.

Pittsburgh Marathon Dayton Hamvention same weekend

The annual Pittsburgh Marathon will take place on Sunday, May 1st. Again this year an appeal has gone out for Amateur participation. Last year 173 hams took part in the race. Hopefully, there will be as many or more hams involved. Unfortunately, that is also the weekend of Dayton's HamVention.

If you would like to participate in providing communications for the race contact Konrad Kammerer, N3EKJ; 5649 Willow Terrace Drive; Bethel park, PA. 15102 or call him at 831-6478.



Limited seating still available on bus to Dayton HamVention

ARES Report

Walt Piroth, N3BKW
ARES EC Washington County



Our National Weather Service/PEMA Drill was a real adventure. Before all the exciting details I would like to say what a great job our ARES/RACES team did with this thing. An extra special thanks to Frank, KA3UWW, Ted, WB3BZK and John, N3PCE.

The whole thing was a message extravaganza. Twenty some all together. And we copied them in formal ARRL style, well almost. I wonder who thinks in an actual emergency this is how things get done.

Frank was Net Control, Ted was at Emergency Services and John was at the Red Cross office. I operated from the W.A.COM club room in the George Washington. I

had some help from Jim, NW3X. We also had mobile and home stations on the Net including Tina, N3NVP; Joe, KA3MZS and others.

Operations were primarily on the K3PSP repeater with some messages passed on W3CYO/R. Contact was made via relay to PEMA Eastern Headquarters in Indiana on HF. The four surrounding counties were contacted directly on 2 Meters. Frank passed traffic on the 09 repeater in Allegheny County and I managed to report in with N3IDJ in Green County via their 5.23 repeater, with Westmoreland County on the 5.15 repeater in Derry, with WB4LUC at the County Court House in Fayette County via the 7.045 repeater and with the Monessen Group on 7.27. All

these Counties were active with the Drill.

We had all kinds of nasty stuff -- tornadoes, floods, fires, explosions, high winds, radio towers blown down, a cat blown away, people missing, roads closed, traffic slowdowns on the interstates, houses damaged and destroyed. At one point there were seven fatalities, homeless, a nursing home damaged and evacuations. Mass care centers were established and of course everything came to a screeching halt for lunch. State employees need their strength...

It must be Spring! The March of Dimes WalkAmerica is scheduled for April 24th. A Map appears on the front page in the Newsletter. The route has been changed again. But it will start and end at the Washington Park. I think it starts at 9AM. We can use your help. Please sign up at the April meeting or catch me on the net. Another scheduled event is the Special Event Station at the Trolley Museum on Saturday, April 30th. This event will be with the Monessen Club. The sign up sheet will also be at the April meeting....

WACOM Committee Phone Directory

A.R.E.S.	Walt Piroth, N3BKW	746-2327
RACES	Bob Ketzell, KB3IN	228-0425
EMA	Dave Smith, N3LIK	225-0346
MARS	Jack Kelvington, K3DMY	223-3219
President	Dave DeMotte, N3IDH	228-8178
Vice President	Joe Stout, KA3MZS	228-1090
Secretary	Tom Fox, KA3NIY	223-9666
Treasurer	Russ Burhenn, N3NEL	222-4037
Education	Jim Burtoft, KC3HW	228-0546
2mtr Net Mgr.	Norm Torisky, N3KLR	745-6154
10mtr Net Mgr.	Joe Musante, WB3GTE	223-0897
Newsletter Editor	Jim McNutt, NW3X	941-5159
Repeater	Sam Mayberry, W3CYO	222-0367
VE Testing	Stan Cole III, NX3P	223-0104

New Members

Cheryl McGrevin, N3PYC

"Getting Started" videos available

"Getting Started in Contesting," a new ham radio how-to video, has been released by CQ Communications, Inc., publishers of CQ Amateur Radio and other hobby-radio magazines. It is the fifth video in the "Getting Started" series which would make good programs for affiliated clubs.

"Getting Started in Contesting" introduces the viewer to the basics of ham radio contesting, with the expert help of several world class contesters, including

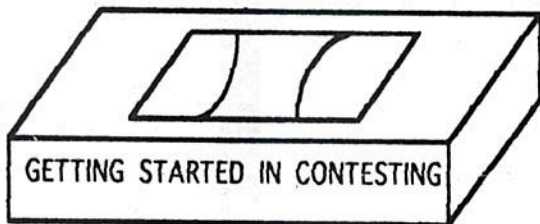
CQ's own contest editor - and one of the world's leading contesters, John Dorr, K1AR.

Other top contesters and contests groups featured in the 50 minute program include Ken Wolff, K1EA, author of the "CT" contest-logging program; Dick Newell, AK1A, author of "Packet Cluster" spotting network used by contesters and DXers alike; Yankee Clipper Contest Club past president Stu Santelmann, KC1F, who originated the club's "Contest University" program for new contesters, and Bob Moore, N2RM.

Viewers will see competitors in action at a variety of small and medium size radio

stations, plus at contest super-stations K1EA (with K1AR operating) N2RM and perennial VHF contest champions W2SZ/1. A segment featuring K1AR as "the CQ Answer Man" provides answers to the most basic contesting questions as well as advice for effective contest preparation and operation.

"Getting Started in Contesting" joins four other programs in CQ's "Getting



Started" series - "Getting Started in Ham Radio" (a

guide to setting up and operating your first ham station), "Getting Started in Packet Radio," "Getting Started in Amateur Satellites," and "getting Started in DXing," which was a finalist in the International Television Association's 1993 "Golden Reel Awards" competition.

Each video is priced at \$19.95 plus shipping and handling. CQ videos are available on VHS cassette only. The videos are available from many ham dealers or may be ordered directly from CQ by calling 1-800-853-9797. Discounts are available to radio clubs and for volume purchases.

WACOM VE test results

Twenty two hams and future hams took tests at the March session of the WACOM VE exams. Two made their Novice classification; six achieved codeless Tech; two made Technician with HF privileges and three made General classification. Others passed various elements but did not upgrade.

The two new Novices are: Dawn Zacharias and David Corsello. The six making codeless Tech were Gordon Hoskins, Robert Neitzett, Justin Kern, Steve Felix, Dustin Felix, and Dianne Cabler. Tech with HF privileges were: Matt O'Black and Samantha Sanford. New General class operators are: Tina Group, N3NVP; Keith Ostrom, KB3ANK; and Vernon Smith, N3JNM.

VE examiners were: Bill Hill, W3IBT; Regis Stinely, NZ3E; John Moninger, WA3VKC; Jim Grazulis, KA3KSP; Stan Cole, III, NX3P and Lee Sanford, AA3FI.

Dayton bus trip

A limited number of seats are still available for the bus trip to Dayton on Saturday, April 30th. The bus will leave around 2AM - stopping for breakfast on the way. Return trip should leave Dayton around 5PM. Contact Joe Stout at 228-1090 for reservations.

HamVention award winners announced

For the fourth time in the past five years, an ARRL dignitary has been named the Dayton HamVention Ham of the Year.

Chosen this year was Perry Williams, W1UED, who retires at the end of April as ARRL Washington Area Coordinator, after 40 years of

League service.

Perry is featured in a story about the League's Washington Office that appeared in the April issue of QST.

Receiving the Technical Achievement Award is Dick Newell, AK1A, of Bolton, Massachusetts, the inventor of

the packet cluster. A QST story about Newell appeared in the August 1990 edition on page 54.

The DARA Special Achievement award goes to Russell Kroeker, N7HGE, of Kent Washington, whom DARA credits with conceiving the Evergreen Intertie, a system of interlinked repeaters stretching from California to British Columbia. A description of the system appears in the June 1991 QST on page 93.

Previous Dayton Hams of the Year include former ARRL President, Harry Dannals, W2HD (1993); International Amateur Radio Union President and former ARRL General Manager, Dick Baldwin, W1RU (1992) and ARRL Hudson Division Director Steve Mendelsohn, WA2DHF (1990).

The awards will be presented during the Dayton HamVention April 29th to May 1st, 1994.

County of Washington

EMERGENCY SERVICES DEPARTMENT

February 24, 1994

Mr. Walt W. Piroth
218 Hodgson Ave.
Houston, PA. 15342

Dear Walt,

From the initial reports that we have received from the federal and state evaluators involved in the recent Beaver Valley Nuclear Power Facility Exercise, all participants did the jobs they were asked to do and the exercise was very successful. All of the comments that I received were positive, and each of the evaluators went out of their way to say how well-trained and competent all of our staff and volunteers were.

Needless to say, I am very happy to hear these remarks and want to take this opportunity to thank you for the part you played in the drill. In a period of history that has self-interest and apathy as its hallmarks, it is gratifying to be able to work with a large cadre of committed, well-trained individuals such as yourself.

Very truly yours,

J. Bracken Burns, Sr.
Director

FCC/ARRL BULLETIN

OK to return to air

**Tanya & Nancy
are through with it!**

FCC/ARRL BULLETIN

Grounding tips against lightning

by Gary Coffman KE4ZV

Destructive Testing Systems

In the ARRL handbook (and also the NEC - National Electrical Code) there is a lot of discussion about protecting the feedline by grounding the shield of the coax, using arrestors, switching them to ground when not in use etc. There is also some discussion of grounding a ground mounted tower. But I haven't been able to find much on roof towers. What I want to be sure (or at least as sure as possible) of is that if the antenna/tower gets hit, the lightning strike doesn't arc through the house, etc.

Some specific questions about roof mounting are:

1. What size of ground lead(s) to use for the tower?

The NEC says number 8 solid is the minimum size for the download of a lightning rod. Consider this the smallest wire you can use. Since lightning is a pulse that has RF components through VHF, skin effect matters. A better download is 5 inch wide copper flashing run as straight as possible to ground, but in no case having a 90 degree or sharper bend in the path.

2. How many?

If you use the correct size, and do the bonding correctly, one is sufficient. If you aren't going to be able to inspect the run frequently, you might consider paralleling a

number 8 solid wire with the 5 inch strap so that if corrosion opens one connection, you will still have a better path to ground than through your roof.

3. What paths do you run them?

Normally, you want the shortest and *straightest* path to ground. However, ground loops can be disastrous. Make up your mind to establish a single ground point somewhere on your property and connect all ground runs to this one point. Make sure the utility grounds are also bonded to this point. Don't ever depend on earth conductivity to close a ground circuit and don't ever use a feedline shield as a ground conductor.

It's OK to have multiple grounds, but they must tie to the single point ground via low inductance, high conductivity cabling in a "star" configuration, not in a daisy chain. Daisy chaining grounds is a recipe for disaster.

Bring "all" cables into your shack via a "ground window", that includes power and

telephone. A ground window is a single small area, usually a rack panel, copper plate, or the like, that each wire is attached to via an arrestor of the proper type for that kind of cable. The ground window is then connected to the master single point ground by a heavy strap or cable. This assures you that all cabling entering the shack will be at near the same potential during a strike (plus or minus the breakover voltage of the arrestors). With quality arrestors, you shouldn't ever have a voltage differential of more than 200-400 volts across your equipment. Most equipment will tolerate this kind of voltage for the few milliseconds required. Note that your entire shack may be elevated to several thousand volts above ground due to the resistive drop of your single ground lead, but as long as "every" part of the shack is elevated the same amount, no net current can flow.

4. Do I need to stand them off from the roof?

It's generally not necessary, but it won't hurt. Remember that a direct lightning stroke will typically flow 4,000 amperes or more for several milliseconds. The wire can get quite hot. I've seen number 12 solid "vaporized" by a lightning strike. That's why you want to use at least number 8 wire or heavy strap.

(Continued on page 6)



Grounding tips against lightning

continued from page 5

5. Do I need to attach to each leg of the tower?

That depends on the tower construction. If the tower is welded, connecting to one leg is sufficient. If it is bolted or riveted, inspect it carefully for loose connections and use bond straps to make it a single conductor.

6. What about the guy wires?

Generally, "don't" ground the guy wires. If the tower is going to carry an HF antenna, you'll likely want to break guys with insulators anyway to avoid pattern disturbances.

7. Anything else I should know?

A single ground rod is not an effective ground in most soils. Use at least three no

closer than 4 feet apart in a triangular arrangement. Bond them all together with your heavy strap. If you have "metal" underground water piping, tie to that too. Remember, "star" configuration. No ground should connect to another except at the "single" point connection. And no downlead should connect anywhere but at the single point.

Always mechanically bond ground wires and straps. Don't depend on any soldered connection. Solder will melt when lightning strikes. The NEC says there should be no splices in a ground run. That's perhaps a bit extreme. A good mechanical and electrical splice should be OK, but rather safe than have the insurance company void your claim.

There's no guarantee when it comes to lightning strikes, but it is your family in the house and you want to be sure you have done everything you can to protect them. Lightning kills more people each year than any other weather related thing. Besides, the better ground field can help your HF signals every day.

FINAL NOTICE

RENEW YOUR
WACOM
MEMBERSHIP
NOW

FCC airwave auction

WASHINGTON (AP) — The Federal Communications Commission took a first step Tuesday for setting the ground rules by which businesses can bid for certain chunks of the airways.

The FCC adopted "generic" rules for auctioning radio frequencies for a variety of new services, including the next generation of mobile telephone service called personal communications service.

The rules will:

— Allow several auctions to be

conducted at the same time.

— Require \$2,500 as a minimum up-front payment for parties to participate in the auction.

— Set deadlines for payments on winning bid.

— Set aside a portion of the frequencies to be bid on by women, minorities, rural telephone companies and small businesses.

FCC Chairman Reed Hundt said the rules set the stage for "the most important disposition of public property"

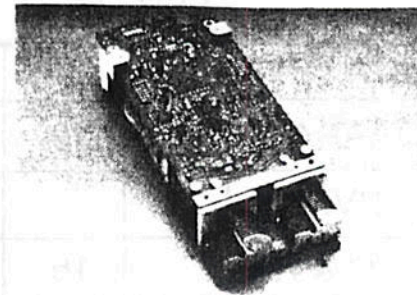
since the Oklahoma land rush. More detailed rules for specific services — notably lucrative personal communications service licenses — will be decided later this year.

Companies obtaining personal communications services licenses will be able to offer consumers the next generation of mobile phone service, in which the number travels with the phone's owner.

The FCC is exploring all options — electronic, oral and paper — for submitting bids, said Robert Pepper, chief of the FCC's Plans and Policy Office.

Yaesu FT-890AT purchased by WACOM

World's smallest HF rig with built-in antenna tuner



Automatic antenna tuner mounted inside the HF rig.

The Yaesu FT-890AT features DLT (Digital Linear-phase Tuning) for silky smooth tuning. Includes advanced RF front end design of the FT-1000 for better receiving.

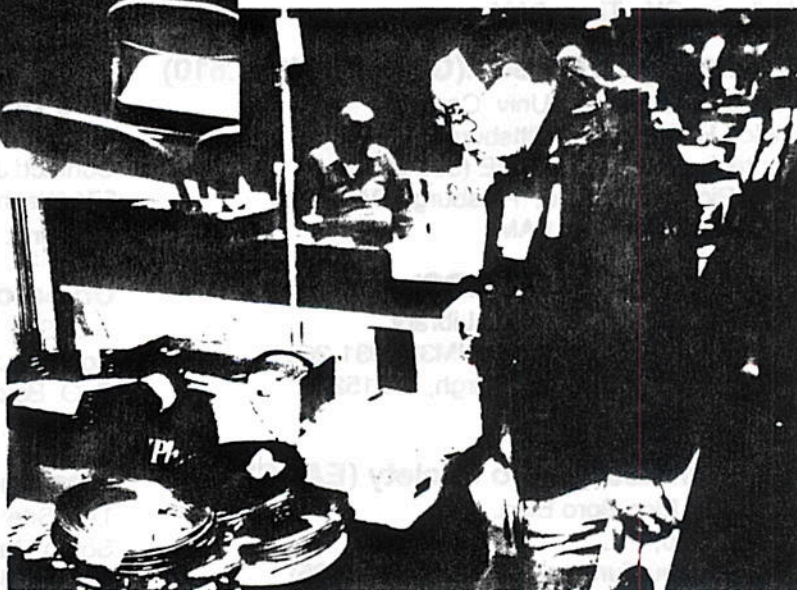
Two Rivers Hamfest

photos by Kevin Smith



Hugh Turnbull, WA3ABC, and Bernie Fuller, N3EFN lead ARRL Forum during Two Rivers Hamfest. Walt Piroth, N3BKW, is around there somewhere.

A large crowd turned out for this year's hamfest at the ExpoMart in Monroeville. Most of the tables and booths were sold out prior to the event according to officials with Two Rivers - nice job!



Bill Hill, W3IBT looks at some coax for one of his radios. Is that a 2 meters mag mount in his hand?

VE EXAM SCHEDULE 1994

FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

ATA			16			16			15		
TAARA		19			18			17			17
GPVHF	5		2						1		3
SCARC		16			15			21			21
TRARC		27			19			18			18
UARC	20			22				18			18
EARS	19	19	16	21	18	16	20	17	15	19	17
BCARC	12			14			13			12	
NHARC	5			7			6			5	
WACOM		15			9		11			20	

Amateur Transmitters Association (ATA)

Test Site: Carnegie Library (North Side)
 Contact: Ben Freiland W3QJW (795-2775)
 127 Spring Grove Road, Pittsburgh, PA 15235
 Walk-Ins: OK Time: 9AM

Butler County ARA (BCARA) (147.36 +)

Test Site: Boy Scouts Center; 830 Morton Ave, Butler
 Contact: Gerald Wetzel/W3DMB (282-6777)
 784 Mercer Rd., Butler PA 16001
 Walk-ins: OK Time: 9AM

Greater Pgh. VHF Soc. (GPVHFS) (146.610)

Test Site: Duquesne Univ. Campus
 Mellon Hall; Bluff St. Pittsburgh, PA
 Contact: Jim Cottrill, K3LIE (563-2379)
 3119 Pioneer Avenue, Pittsburgh PA 15226
 Walk-Ins: OK Time: 9AM

North Hills ARC (NHARC)

Test Site: Northland Public Library
 Contact: John Rosenwald, NM3P (931-2651)
 400 Stevens Drive, Pittsburgh, PA 15237
 Walk-Ins: OK Time: Noon

Elco Amateur Radio Society (EARS)

Test Site: Elco Boro Bldg.
 Rt. 88, Elco, PA.
 Contact: Lou Furlong, KA3FLU (938-8125)
 P.O. Box 289, Stockdale, PA. 15483
 Walk-Ins: OK Time: 6PM

Steel City Amateur Radio Club (SCARC) (147.03)

Test Site: Chas. E. Kelly Support Facility, Oakdale Army Post
 Contact: Mac McKee/KC3RJ (279-8756)
 138 Noblestown Road
 Carnegie PA 15106
 Walk-Ins: No Time: 7PM

Triple "A" ARA (TAARA) (146.85 -)

Test Site: Comm. College Beaver County, Airport
 Contact: Thom Peluso, KF3V (843-6560)
 501 10th Street, New Brighton, PA 15066
 Walk-Ins: OK Time: 1PM

Two Rivers ARC (TRARC) (146.73-)

Test Site: PSU, Frable Bldg. McKeesport Campus
 Contact: James Lundberg, WB3M
 571 Washington St. McKeesport, PA 15132
 Walk Ins: No Time: 9AM

Uniontown ARC (UARC) (147.045+ 147.255+)

Test Site: Uniontown ARC Clubhouse
 Contact: John Cermac, WB3DOD (246-2870)
 P. O. Box 433, Republic, PA 15475
 Walk-Ins: OK Time: 1PM

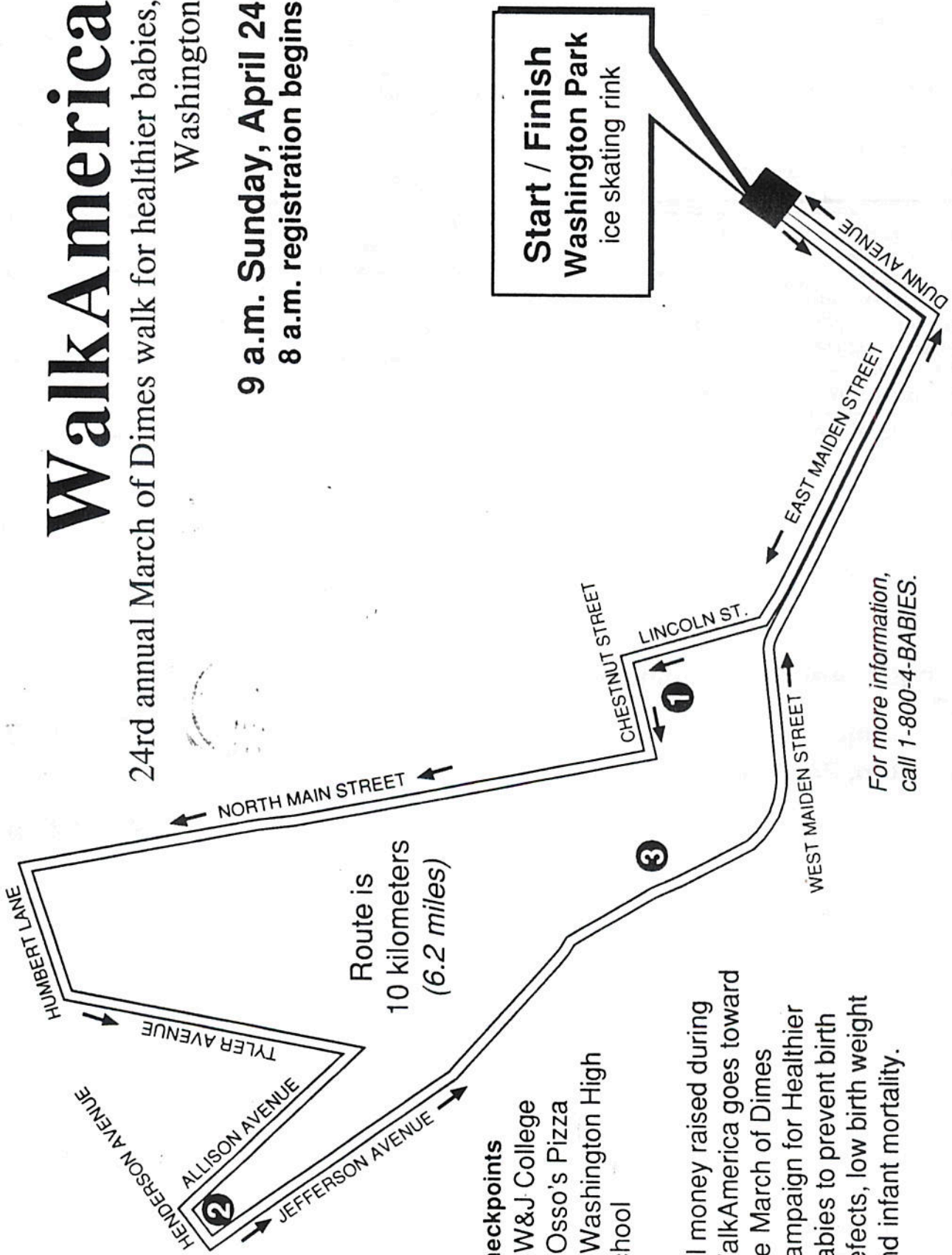
Washington Amateur Comm (WACOM) (145.49)

Test Site: George Washington Hotel
 South Main St. Washington, PA
 Contact: Jack O'Korn, AA3FN (228-4197)
 WACOM VE Exams, Box 1386, Washington, PA 15301
 Walk-ins: OK Time: 7PM

WalkAmerica

24rd annual March of Dimes walk for healthier babies,
Washington

9 a.m. Sunday, April 24
8 a.m. registration begins



Route is
10 kilometers
(6.2 miles)

Checkpoints

- 1. W&J College
- 2. Osso's Pizza
- 3. Washington High School

All money raised during WalkAmerica goes toward the March of Dimes Campaign for Healthier Babies to prevent birth defects, low birth weight and infant mortality.

For more information,
call 1-800-4-BABIES.

WACOM Calendar of Events for April 1994

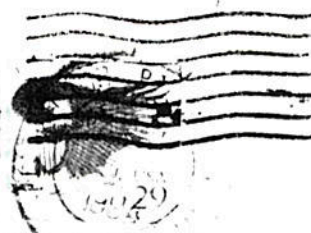
TUESDAY		THURSDAY		SATURDAY/SUNDAY	
DATE	2 Mtr NCS	10 Mtr NCS			ARES NCS
5	N3KDP	KD3VX	7 WACOM Meeting	2/3	Beaver Butler Fayette Greene Indiana
12	N3PCE	WB3GTE		9/10	
19	KA3RNM	N3HKQ		16/17	
26	AA3FN	KA3VOM		23/24 WalkAmerica	
				30/1 Trolley Spc. Event	

Tuesday 8:30 PM - 2 Mtr Net 145.49/443.3/224.4
Tuesday 9:00 PM - 10 Mtr Net - 28.340MHz
Sunday 9:00 AM - RACES Western PA Net - 3990.5KHz
Sunday 7:30PM - ARES Western PA Net - 1476.09
Skywarn Nets - K3PSP/R - 146.79MHz
Digipeaters (WASHPA - 145.01)
Club BBS KA3UWW on 145.05
County Simplex Frequency 147.495

24 - March of Dimes WalkAmerica
 30 - Special. Event: Arden Trolley Museum
 by Monesson ARC
 28 -1 - Dayton HamVention

The contents of the WACOM Ham may be reproduced providing credit is given to: The WACOM Ham

Washington Amateur Communications
WACOM
P.O.Box 1386
Washington, PA. 15301



First Class

Mail to:

FAY FRANKENBERY, KA3VOM
 KEITH & DAVE FRANKENBERY, KD3RZ
 RD#3 BOX 407
 EIGHTY FOUR, PA. 15330