

# W5YI

Nation's Oldest Ham Radio Newsletter

## REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

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## "Earthwinds" Balloon to Carry Amateur Radio

"Earthwinds," the most ambitious manned balloon flight ever attempted, is the creation of **Larry Newman, KB7JGM**, of Scottsdale, AZ. Newman has previously crossed both the Atlantic and Pacific ocean in record-breaking flights. We have been following the *"Earthwinds Project"* for some three years now.

This time, Newman will again attempt the first ever around-the-world manned helium balloon flight. It will be his second try. His first effort was actually scheduled for early 1992. That flight was to begin in Akron, Ohio, then to Europe, across Russia to the Pacific Ocean, then back to the U.S.

The Earthwinds balloon is really two balloons - one over the other. It sort of looks like an hour glass. A climate-controlled 25 ft x 10 ft enclosed pressurized gondola hangs from the upper 140 ft diameter zero-pressure helium balloon made of gossamer-thin plastic film. Below the gondola, a 100 ft diameter variable pressure compressed air balloon acts as ballast. The \$5 million balloon system is as tall as a 35 story building and is filled with 1.1 million cubic feet of helium, equivalent to the helium in more than five Goodyear blimps.

On the first attempt, the ESPN cable TV network was signed up to carry the launch live and use transportable satellite stations and an airborne satellite link would provide live video coverage during the flight. Using new light-weight low-power British Telecom video compression equipment, the crew planned to broadcast a live

update on ESPN daily at 7 p.m. The TV unit converts sound and pictures into digital data to be transmitted from the gondola to INMARSAT, a satellite network used for maritime voice and data communications. A one-hour special "Expedition Earthwinds: Balloon Around the World" was to be aired at the end of the flight.

Since Larry Newman, KB7JGM had a Nov-ice ham ticket, plans were to have an on-board 10 meter radio digitized voice beacon on 28.303 MHz lashed to the Global Positioning System (GPS) which would read out the balloon's latitude, longitude and speed in knots at 15 and 45 minutes past the hour. But the flight never happened. Inclement weather forced the delay. And the launch window closed!

The next attempt was scheduled for late 1992. But on Thursday evening, November 19, disaster struck! The inflatable dome housing the anchor balloon and much of the gear for the launch ripped open. Some 50 people inside got out as the building collapsed completely freeing the fully inflated 100-ft diameter anchor balloon. It rolled a half mile into the desert ...ripped and deflated. It was decided eliminate the use of the inflatable dome. The next attempt would be an open air launch.

It took another until couple of months to fabricate a new anchor balloon. Once the balloon was again ready, the project went "on hold" - waiting for the right weather conditions.

The long awaited round-the-world balloon

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launch finally took place in Reno, Nevada, this past January. But it didn't last long. Its dangling ballast balloon crashed into a mountain and was badly damaged. The crew let out the helium and safely landed. Back to the drawing board. The launch window extends from November to February so it would be late 1993 before another attempt could be made.

## All is ready again!

Wind conditions in the jet stream are looking favorable again for a launch any day now of the Earthwind's balloon - now called the "Earthwinds Hilton Balloon." Two of the four-man crew are licensed radio-amateurs. And Larry Newman has now upgraded to a Technician Class ham operator! He will be operating under his call sign, KB7JGM/KT.

Earthwinds is scheduled to launch from the Reno Stead Airfield in Reno, Nevada, when the wind and weather conditions are right. A host of big name sponsors are contributing to the effort. Besides Hilton Hotels, there is American Express Travel, Nestle' USA, Miller Brewingr ...and others. ESPN is not listed as a sponsor for this second attempt. The balloon should reach floating altitude within two hours of launch.

Russian amateur operator Vladimir Dzhani-bekov, RV3DD, the balloon pilot, is also aboard, but will be communicating in Russian to his own people as well as to the Mir space station in earth orbit. The other crewman, Richard Abruzzo of the United States is not a licensed amateur. The mission is supported by NASA, NOAA and the Yuri Gargarin Cosmonaut Training Center.

Since Newman is now a Tech, all ham communications will now be conducted on the 2-meter simplex frequency of 145.550 MHz. This will facilitate communications from the balloon to both the Mir space station, as well as to all amateur operators throughout the world.

"We hope to work as many amateur operators as we can hear simplex on 145.550 MHz from 35,000 feet, near the 45th parallel around the earth," comments Larry Newman. "And since we're only going around once, listen for us at day 1 on the West Coast, day 2 over the Midwest and day 3 on the East Coast," adds Newman. There are 73 nations located within a global band between 30 and 60 degrees north latitude, any of which Earthwinds might overfly.

The launch will be a major media event, so amateur operators should listen to news broadcasts on commercial radio and television for the 48-hour count-down. This is the second attempt at launching the double Earthwinds balloon to float all the way around the world at 32,000 to 35,000 feet in the jet stream. Ground speed will be at about 75 miles per hour. Earthwinds plans to cover about 1,800 miles per day.

The goal of the mission is to become the first

manned balloon to circumnavigate the earth and to break the world distance record (5209 miles) presently held by Larry Newman and the 144 hour duration record held by Richard Abrusso. Newman is the only man alive to have traversed both the Atlantic (in 1978) and Pacific Ocean (1981) by helium balloon.

All crew members are highly qualified! Newman flew solo in an airplane for the first time at age 12. And by 17, Newman had attained all of this pilot's ratings and became a flight instructor. He holds the Congressional Gold Medal, the nation's highest award for Aviation Achievement. (This award has also been granted to such aviation heavyweights as Charles Lindbergh and the Wright Brothers.) Newman also captain's a Boeing 757 for America West Airlines.

Richard Abruzzo (age 30 with 15 years of ballooning experience) will serve as balloon pilot during the round-the-world flight. Richard is the son of the late Ben Abruzzo who accompanied Newman on both the Atlantic and Pacific Crossings. Richard completed his first balloon voyage from North America to Africa just last year.

Earthwind's Co-Captain, Vladimir Dzanibeckov, is a Major General in the Russian Air Force and Chief of the Cosmonaut Training Department at the Yuri Gagarin Cosmonaut Training School. He has spent a total of 146 days in space, completed two space walks and is a two time hero of the Soviet Union.

Crew chief Dave Melton, 34, is an accomplished hot air and gas balloon pilot who has won several awards for his expert flying.

The intended course will take the Earthwinds over the Rocky Mountains toward the eastern United States. The air currents could take the balloon on a northern route over New England, the Atlantic Ocean, Great Britain, northern Europe and Siberia; ...or Earthwinds could float on a southern course across the Carolinas before heading out over the Atlantic, traveling across Asia and Japan before reaching the Pacific Ocean. While the specific route will be determined by air currents, Earthwinds generally will travel across the mid-latitudes of the Atlantic. After crossing the Pacific and re-entering the continental United States, with success, the landing should take place east of Reno two to three weeks after launch.

Navigation will be provided by satellite. The Global Positioning System (GPS) will read out the capsule position to an accuracy of within a few feet. This information will then be transmitted via the ARGOS satellite to the Earthwinds Hilton Operations Center at the Reno Hilton. A COSPAS/SARSAT satellite locator transmitter will be used for search and rescue in case of an emergency.

Only amateur radio 2-meters will be used to conserve power and to avoid time-wasting pile-ups. The locations of the simplex 145.550 MHz QSOs will

be determined by the jet stream as Earthwinds floats over the United States. Amateurs should listen between 30 and 60 degrees north latitude.

Shortwave listeners may also wish to tune in the following frequencies assigned to the Earthwind's balloon project by the Federal Communications Commission in a special temporary authority (STA). All frequencies are upper sideband: 5.451, 5.469, 5.571, 8.822, 10.045, 11.306 and 17.964 MHz. SWLs should listen for the call sign: N93VH.

The capsule's 2-meter antenna is a DC, shunt-fed, halfwave Metz antenna, featuring a stainless steel coil and stainless whip, specifically tested to an outside operating temperature of minus-60 degrees Fahrenheit. Newman expects to receive calls as far away as 500 miles when he is up high in the jet stream.

"We will try to keep a log of every call sign we hear -- even bits and pieces of call signs -- so give it your best shot. When possible, we'll try to read back as many as we hear clearly," adds Newman.

A colorful QSL card picturing the 180-foot upper balloon and 100-foot ballast balloon will be sent to everyone sending in reception only and QSO confirmation. A stamped self-addressed envelope is required. The QSL manager is Gordon West, WB6NOA, at his callbook address. "Gordo" has been making final adjustments to the rig and antenna system on the balloon to insure the best possible signal on the 2-meter band. It had been hoped that Earthwinds might also be able to communicate with the orbiting space shuttle but STS-58 returned to earth before the balloon launch.

## LATE BULLETIN - LATE BULLETIN - LATE BULLETIN EARTHWINDS LAUNCH ATTEMPT ABORTED!

Reno, NV., Nov. 6, 1993 - Project spokeswoman Marty Gordon announced Saturday morning that today's launch attempt of the Earthwinds Hilton around-the-world balloon flight from Reno Stead Airfield had to be aborted after a system malfunction caused damage to the crew capsule.

Crew members Larry Newman, Richard Abruzzo and Vladimir Dzhanebekov were not yet aboard the capsule, and no one was injured in the incident that caused the launch to be aborted.

Project leaders suspect that a cable support anchoring the capsule to the ground gave way and caused the capsule to rise prematurely and then fall. The amount of damage caused is undetermined and will have to be assessed.

Project members will immediately begin an evaluation of what caused the system to fail and conduct an assessment of the damage. It will be at least six to eight weeks before another launch attempt can be made.

## RENEWALS AND AMATEUR RADIO GROWTH

Here is something that not many of us have thought about! The FCC began mailing ten year term licenses in early 1984. They also dropped the grace period from five to two years at the same time. All licenses issued or renewed during the period of January 1984 to December 1988 were ten year term tickets. Thus there were no renewals between January 1989 and December 1993.

Renewals of the five year license simply stopped in 1989. The reason for no renewals during this period was that the ten year term licenses issued between January 1984 and December 1988 still had another five years to run before they had to be renewed (or be dropped to inactive status by the FCC.) **Amateurs who might have dropped out of ham radio by not renewing their five year license - got an "automatic extension" for another five years.**

A review of the FCC licensing records between January 1984 and December 1988 show that on average, 550 amateurs dropped out of ham radio monthly and were purged from the active database. Does this mean that the amateur census could drop by far more beginning in January 1994 since there have been no records purged for five years? It probably does.

Thus, the big question for 1994, is what effect will the ten year term license have on renewals which will be starting up in January 1994. About 4,400 amateurs should be renewing their license every month during 1994. Will they? And how many have dropped out of ham radio during the past ten years? How many that wish to renew simply will forget? The FCC had planned to issue a new "mail back" renewal card beginning in January when a new computer was due to come on-line at Gettysburg. It now looks like this new procedure will not begin until later on since the new computer project is behind schedule.

In any event, it appears that we could easily have a period of far less growth. Heres is a listing of the number of new and renewed licenses during the five year period from 1984 to 1989 which should be renewed from 1994 to 1999. We also show the number of licensees that dropped out of ham radio during this period. Would this same number of amateurs have dropped ham radio during the period from 1989 to 1993 if they had been issued a five year ticket between 1984 and 1989 ...instead of a ten year term? **New and renewal operator licenses issued between 1984 and 1989 and number of licenses Purged:**

Lic's	1984*	1985*	1986*	1987*	1988*	1989*
New	18261	19015	21046	26517	22181	24305
Renew	34031	35686	36818	40327	35835	5619
Purged	6685	16855	17681	15336	12865	15922

(\* = All figures on calendar rather than FCC Fiscal Year basis)

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## AUGUST VE PROGRAM STATISTICS

<u>August</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
<b>No. VEC's</b>	<b>18</b>	<b>18</b>	<b>18</b>
<b>Testing Sessions</b>			
<b>VEC</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>
ARRL	43.2%	49.3%	51.1%
W5YI	38.4	35.6	36.5%
CAVEC	5.7	4.3	2.4
WCARS	1.9	2.8	1.9
GtLakes	3.6	0.0	1.0
SunnyV	1.2	1.2	1.0
Others (12)	6.0	6.8	6.1
<b>Year-to-Date Sessions</b>	<b>5096</b>	<b>6709</b>	<b>7211</b>
<b>Elements Administ.</b>			
<b>VEC</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>
ARRL	46.6%	53.2%	53.6%
W5YI	28.3	28.5	29.1
CAVEC	9.5	5.6	3.4
WCARS	2.5	2.7	2.3
SunnyV	2.7	1.6	1.9
GtLakes	2.2	0.0	1.9
Others (12)	8.2	8.4	7.8
<b>Year-to-Date Elements</b>	<b>111205</b>	<b>135531</b>	<b>133121</b>
<b>Applicants Tested</b>			
<b>VEC</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>
ARRL	46.4%	52.6%	53.6%
W5YI	29.0	28.9	29.0
CAVEC	8.6	5.5	3.2
WCARS	2.6	2.4	2.3
SunnyV	2.8	1.4	1.9
GtLakes	3.7	0.0	1.8
Others (12)	6.9	9.2	8.2
<b>Year-to-Date Tested</b>	<b>66911</b>	<b>81188</b>	<b>78220</b>
<b>August</b>			
<b>Pass Rate - All</b>	<b>65.9%</b>	<b>64.7%</b>	<b>63.5%</b>
<b>Applicants/Session</b>	<b>12.3</b>	<b>10.8</b>	<b>9.2</b>
<b>Elements/Applicant</b>	<b>1.7</b>	<b>1.7</b>	<b>1.7</b>
<b>Sessions Per VEC</b>	<b>37.2</b>	<b>41.8</b>	<b>43.7</b>

### Administrative Errors by VE's/VEC's

<u>August</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Defect. Applications	0.5%	0.2%	0.3%
Late Filed Sessions	4.5%	1.7%	4.6%
Defective Reports	0.1%	0.4%	0.0%

**Note:** The two largest VEC's, (ARRL/W5YI) accounted for 87.6% of all August 1993 test sessions, 82.7% of the exam elements and 82.6% of the applicants.

[Source: Personal Radio Branch/FCC; Washington, D.C.]

## SEPTEMBER AMATEUR LICENSING STATISTICS

<u>September</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	
<b>New Amateurs:</b>					
New Novices	1382	679	617	282	
New Tech's	128	1680	2069	5028	
<b>Total New:</b>	<b>1552</b>	<b>2407</b>	<b>2732</b>	<b>5403</b>	
<b>Upgrading:</b>					
Novices	611	642	562	809	
Technicians	284	*443	*517	*976	
Generals	214	286	332	640	
Advanced	119	206	241	430	
<b>Total:</b>	<b>1228</b>	<b>1577</b>	<b>1652</b>	<b>2855</b>	
<b>Renewals:</b>					
Total Renew:	65	47	69	213	
Novices	8	1	5	14	
<b>Purged:</b>					
Total Dropped:	1495	15	37	14	
Novices	711	6	20	1	
<b>Census:</b>					
<b>Indiv. Oper.</b>	<b>493292</b>	<b>532072</b>	<b>580806</b>	<b>625988</b>	
Change/Year	+28492	+38780	+48734	+45182	
<b>Individual Operators by Class: (and % of total)</b>					
<b>Extra</b>	<b>Advan.</b>	<b>General</b>	<b>Technic.</b>	<b>Novice</b>	<b>Total:</b>
<b>September 1990</b>					
52847	104365	119158	125217	91705	<b>493292</b>
10.7%	21.2%	24.2%	25.4%	18.5%	100.0%
<b>September 1991</b>					
56487	107127	121971	150069	96418	<b>532072</b>
10.6%	20.1%	23.0%	28.2%	18.1%	100.0%
<b>September 1992</b>					
60646	109537	124727	187281	98569	<b>580806</b>
10.4%	18.9%	21.5%	32.2%	17.0%	100.0%
<b>September 1993</b>					
64490	112225	126938	221849	100486	<b>625988</b>
10.3%	17.9%	20.3%	35.4%	16.1%	100.0%
Club/					
RACES &	(1990)	(1991)	(1992)	(1993)	
Military:	2438	2431	2431	2430	
<b>Total Active:</b>	<b>495470</b>	<b>534503</b>	<b>583237</b>	<b>628418</b>	
% Increase	+6.0%	+7.9%	+9.0%	+7.7%	

(\* = Does not include Technicians upgrading to Tech Plus)

### AMATEURS BY CALL SIGN GROUP:

<u>Group</u>	<u>Extra</u>	<u>Advan.</u>	<u>General</u>	<u>Technic.</u>	<u>Novice</u>	<u>Total</u>
A	36283	682	249	7	0	37221
B	4288	29819	54	6	1	34168
C	14824	44538	67729	96549	47	223687
D	8849	37070	58799	125226	100436	330380
Other	246	116	107	61	2	532
<b>Total</b>	<b>64490</b>	<b>112225</b>	<b>126938</b>	<b>221849</b>	<b>100486</b>	<b>625988</b>

[Group "A"=2X1 & 2X2; "B"=2X2; "C"=1X3 "D"=2X3 format.]

[Source: FCC Licensing Facility, Gettysburg, PA]

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## AMATEUR RADIO SERVICE CONTINUES TO GROW!

The public continues to enter the Amateur Service at a rate that is more than double that of just three years ago! That's the bottom line of (fiscal) year-ending statistics released by the FCC's licensing facility in Gettysburg. The big increase, of course, is due to individuals being able to obtain a Technician class ham ticket without first learning the Morse code.

Here are the figures for the last ten fiscal years: 1984 through 1993. Remember that the government year ends on September 30. Keep in mind that the first Codeless Technician class license was issued on March 12, 1991 - right in the middle of the 1991 fiscal year which ends on September 30..

Fiscal year 1993 saw 45347 newcomers become ham radio operators for the first time - about 7% less than last year. The good news is that this represents more than double the prior seven year average of 21700 first time amateurs. And note how 80% of all beginners are now choosing the Technician path into ham radio. Less than one newcomer in five is taking the Novice route into ham radio.

<u>License First Time Amateur Radio Licensees</u>								
Class	1984	%	1985	%	1986	%	1987	%
Nov	17392	93%	15913	92%	19147	91%	22319	92%
Tech	730	4%	851	5%	1163	6%	1452	6%
Other	678	3%	609	3%	669	3%	567	2%
Total	18800	100%	17373	100%	20979	100%	24338	100%
%			-7.6		+20.8		+16.0	

Class	1988	%	1989	%	1990	%	1991	%
Nov	18550	88%	20047	87%	22979	88%	19922	52%
Tech	2117	10%	2498	11%	2617	10%	17790	46%
Other	413	2%	520	2%	538	2%	651	2%
Total	21080	100%	23065	100%	26134	100%	38363	100%
%			-13.4		+9.4		+13.3	

Class	1992	%	1993	%
Nov	12305	25%	8616	19%
Tech	35914	73%	36121	80%
Other	765	2%	610	1%
Total	48984	100%	45347	100%
%			+27.7	

The number of licensees upgrading their existing operator license continues at an all time high! The number of Technicians upgrading (\* = shown below) does not include Codeless Techs who upgraded to Tech Plus by passing a telegraphy examination. The Commission does not keep the Tech Plus database which is maintained by the VEC's. "Technicians upgrading" only includes those Techs who upgraded to the General, Advanced or Amateur Extra class (and NOT from Technician to "Tech Plus").

## From Amateur Radio Service Licensees Upgrading

Class	1984	1985	1986	1987	1988
Nov	8829	10422	11151	13365	14525
Tech	2504	3833	3861	3687	4780
Gen	3361	3829	4358	4007	4019
Advan	1490	2214	2858	2755	3018
Total	16184	20298	22228	23814	26342
% Inc.		+25.4	+9.5	+7.1	+10.6

Class	1989	1990	1991	1992	1993
Nov	15198	16417	15326	10070	6683
Tech	5017	6092	*7448	*8046	*7662
Gen	3835	4343	4834	5010	4997
Advan	2739	2847	3217	3670	3248
Total	26789	29699	30825	26796	22590
% Inc.		+1.7	+10.9	*+3.8	*-13.1

It is also interesting to note the number (and the peak months) that newcomers enter the hobby. Figures for the past eight years follow:

## Fiscal First Time Amateur Licensees by Month

Year:	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1984	1076	1169	2088	1887	1179	2624
1985	961	1281	1552	1343	1242	2001
1986	1356	910	2385	1477	1805	1606
1987	874	1404	1826	2248	1889	795
1988	882	1131	2582	1189	1624	2733
1989	923	1769	2144	2234	1274	2147
1990	1811	1244	2170	2671	1941	2727
1991	1826	1746	3259	1816	2162	2656
1992	4501	2687	3940	4030	4092	4806
1993	2035	1525	3322	4728	3680	4239

## Fiscal First Time Amateur Licensees by Month

Year	Apr.	May	June	July	Aug.	Sep.	Total
1984	2073	1898	2072	987	968	779	18800
1985	2043	2174	1186	1431	1297	862	17373
1986	2767	958	2028	2806	1377	1504	20979
1987	2950	6797	1850	870	918	1917	24338
1988	2195	3002	1494	1842	1347	1059	21080
1989	2821	3302	2003	1601	1488	1359	23065
1990	2658	4284	1984	2003	1089	1552	26134
1991	5749	4714	3231	4676	4121	2407	38363
1992	5215	4178	5957	3843	3003	2732	48984
1993	3290	5035	5978	2125	3787	5403	45347

## Ham Census - Ten Most Populated States

### (1.) California

1984	1985	1986	1987	1988
56606	59960	58400	59944	61432
1989	1990	1991	1992	1993
66130	71895	79031	87304	95126

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## (2.) Florida

<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
23778	24518	25476	26242	27094
<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
28856	30755	33128	35991	38547

## (3.) Texas

<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
24124	24408	24930	25495	25992
<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
27750	29261	31699	34487	36929

## (4.) New York

<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
25996	25833	26030	26001	25505
<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
26878	28202	30073	32472	34436

## (5.) Ohio

<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
20467	20276	20370	20783	21010
<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
22179	23317	24944	27002	28798

## (6.) Pennsylvania

<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
17223	17153	17309	17525	17531
<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
18439	19391	20584	22159	23584

## (7.) Illinois

<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
17588	17384	17446	17548	17509
<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
18286	19070	20183	21567	22798

## (8.) Washington

<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
12383	12600	12997	13436	14016
<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
15034	16046	17492	19185	20847

## (9.) Michigan

<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
14389	14212	14158	14259	14258
<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
15052	15670	16690	18091	19392

## (10.) New Jersey

<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
12958	12924	12910	12932	12823
<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
13482	14068	14835	15869	16757

The top ten states account for more than half of the U.S. amateur population (53.9%).

### The ten states with the fewest amateurs are:

Delaware 1,371, Wyoming 1,415, South Dakota 1,442, North Dakota 1,482, Vermont 1,825, Montana 2,410, Rhode Island 2,417, Alaska 2,780, Hawaii 3,057 and Idaho 3,101

### Amateur Census Since 1984 by License Class:

<u>F.Y.</u>	<u>Extra</u>	<u>Advan.</u>	<u>Gen.</u>	<u>Tech.</u>	<u>Novice</u>	<u>Total</u>
1984	35624	97084	116804	79950	80461	409923
1985	37968	97825	117340	83117	76337	412587
1986	40768	98195	116864	86148	79107	421082
1987	43214	98147	114424	91633	82779	430201
1988	46152	98354	112989	99603	79667	436828
1989	49545	101514	116496	112631	84614	464800
1990	52847	105365	119158	125217	91705	493292
1991	56487	107127	121971	150069	96418	532072
1992	60692	109537	124727	187281	98569	580806
1993	64490	112225	126938	221849	100486	625988

### FCC ANNOUNCES 1994 MAXIMUM REIMBURSEMENT FEE FOR AN AMATEUR OPERATOR EXAMINATION

The FCC announced on October 29th that effective January 1, 1994, the maximum allowable reimbursement (testing) fee for an amateur license examination will be \$5.75. This amount is based upon a 2.7% increase in the Department of Labor Consumer Price Index between September 1992 and September 1993. [The maximum allowable test fee began at \$4.00 in 1984 and has been increased every year since then.]

Volunteer Examiners (VEs) and volunteer-examiner co-ordinators (VECs) may charge examinees for out-of-pocket expenses incurred in preparing, processing, administering or co-ordinating examinations for amateur operator licenses.

The amount of any such reimbursement fee from any examinee for any one examination session, regardless of the number of elements administered, must not exceed the maximum allowable fee. Where the VEs and the VEC both desire reimbursement, they jointly decide upon a fair distribution of the fee.

This announcement is made pursuant to Section 97.527 of the Commission's Rules 47 CFR §97.527. (FCC Public Notice released Oct. 29, 1993, Washington, DC.)

- Both the **ARRL and W5YI-VEC organizations will be charging the maximum amount (\$5.75)** during 1994. Beginning January 1, 1994, the W5YI-VEC will reflect \$3.25 of the \$5.75 fee to its VE teams when 10 or more applicants are examined; \$2.50 per examinee when the test session contains nine or less applicants.

- **The fastest growing Amateur Radio state?** It is Utah! In 1984 there were 2,442 ham operators in Utah. Now there are 5,573 - an increase of 128% during the past decade. No other state except Utah has doubled the number of ham operators although Puerto Rico (which is not a state) has increased from 3,098 to 8,358 - a 170% increase. Puerto Rico also has the confusing distinction of being the only area with more Novice operators (4489) than Technicians (2414.)

• **Dr. John S. Burningham**, **WB8PUF**, of Mahopac, NY, has filed a very professionally completed *Petition for Rule Making* with the Commission seeking a rule change which will **allow digital packet radio networking to operate on the 6 meter wavelength band**. He contends this "...will allow the further expansion of developing technologies to the benefit of the Amateur Radio Service."

Burningham also believes the inclusion of the 6 m wavelength band is necessary for longer distance communications than are reliably capable on the 1.25 m wavelength and shorter bands now authorized for auxiliary station operation.

He argues "Part §97.1 provides the basis for the existence of the Amateur Radio Service. Section §97.1(c) - advancing skills in both the communication and technical phases of the art - is specifically a mandate for rule changes which will advance the communication and technical phases of the art; these proposed changes are in support of the continued development of new technologies, and the development of communication and technical expertise of the licensed amateur radio operators.

"47 C.F.R. §97.3(a)(7) defines an Auxiliary station as an amateur station transmitting communications point-to-point within a system of cooperating amateur stations. This definition clearly includes stations involved in digital packet radio networking.

"It must be remembered that amateur radio operators are in the hobby not for profit or commercial gain, but as a way to expand their ability and for assisting in emergencies as communicators. While the expansion of a licensee's technical ability and technological developments are often transferred to their income producing activities and therefore the American economy, this transference of ability and technology is not against the essence and rules of the Commission; but in fact specified in §97.1(b) [contributing to the radio art] and §97.1(d) [expanding the existing reservoir of trained operators, technicians and electronics experts.].

"The transfer of this technological knowledge and development is of importance to our nation for maintaining our industrial position in the community

of nations. The negative effect of not adopting the essence of this proposal is to inhibit the development of digital packet radio networking and hinder emergency communications.

"I propose the following rule changes to 47 C.F.R. §97.201(b):

**Existing wording:**

An auxiliary station may transmit only on the 1.25 m and shorter wavelength bands, except the 431-433 MHz and 435-438 MHz segments.

**Proposed wording:**

An auxiliary station may transmit only on the 1.25 m and shorter wavelength bands, except the 431-433 MHz and 435-438 MHz segments. Auxiliary stations may also transmit on the 6 m band when retransmitting digital packet radio communications using the American Radio Relay League, Inc. AX. 25 Amateur Packet - Radio Link Layer Protocol, Version 2.0, October 1984 (or compatible)...

[Petition filed October 19, 1993 with the FCC]

• A radically different and streamlined FCC Form 610, **Application for Amateur Operator/Primary Station License**, will debut early next year. (The word "Primary" is a new addition to the form name since Congress has now authorized the issuance of special "vanity" call signs.)

The form will replace the March 1992 version which (although it carries a Feb. 28, 1995 expiration date) may not be used. The reason is that the new form has been designed to integrate with the new computer system coming on line at Gettysburg, PA. next year - and an "over-the-phone lines" electronic filing system to be initiated by the VECs to an FCC "bulletin board."

The form does away with all the boxes previously contained in the *Administering VE's Report* which is now located near the bottom of the front side of the form; right above the VE Certification Section. (This has been moved from the back to the bottom of the front side right underneath the *Administering VE's Report*.)

VE teams will now just indicate one of six (including Technician Plus) operator licenses qualified for. The word "None" was eliminated. Provision has been made for the FCC to begin issuing Tech Plus licenses once the new computer system is in place.

Also eliminated is the Current Station Location, Novice VE certification section, "Reinstate license expired less than 2 years" (now handled as a simple renewal), and "Change Station Location". The accompanying instructions have been reduced to two instead of four pages.

One thing that has not been reduced, however, is the *Physician's Certification of Disability*. It now will take up the entire back of the Form 610 and contain detailed information to the physician on which to base a decision on whether the applicant is indeed severely handicapped and unable to pass an accommodated 13 or 20 words-per-minute telegraphy examination. The previous Form 610 had this information in the tear-off instructions section which usually was not seen by the doctor.

• A new October 1993 version of the FCC Form 756, **Application for Commercial Radio Operator License**, has been released. Previous editions may still be used, however. The new form is designed to better work with the newly privatized COLEM (Commercial Operator License Examination Manager) System.

Added to the new form is: (1) provision for the GMDSS (*Global maritime Distress and Safety System*) Operator and Maintainer Licenses that will shortly be available and; (2) a new Anti-Drug Abuse Act statement. The form has been reduced from 4 pages to 2-sides of one page.

We also have been advised by an official at Gettysburg that we made an error on our "Getting a Second Class Radiotelegraph License" write-up in our last issue. There is only one fee (the examination fee) associated with commercial radio operator licenses administered under the COLEM System. Congress still has to approve the second ("processing") fee. A \$35.00 processing fee does apply, however, to renewal and replacement commercial radio operator licenses when the licensee is not examined for a new license.

It also appears that the Element 5 and 6 (Basic and Advanced Radiotelegraph) question pools will not be available in time for December testing as originally scheduled by the FCC. The next commercial radio licenses to be phased into the COLEM System will probably be the GMDSS licenses.

## AMATEUR SERVICE RECIPROCAL AND INTERNATIONAL OPERATING ARRANGEMENTS

On October 26, 1993, the FCC circulated the following two *Public Notices* which contained updated information on third-party communications and reciprocal operating arrangements

The United States has made arrangements with the following countries to grant a reciprocal operating permit (FCC Form 610-AL) to their citizens who hold amateur service licenses issued by the country of citizenship:

Antigua and Barbuda, Argentina, Australia, Austria, The Bahamas, Barbados, Belgium, Belize, Bolivia, Botswana, Brazil, Canada (Canadian amateur service stations do not need a reciprocal operating permit while operating in the United States), Chile, Colombia, Costa Rica, Cyprus, Denmark (including Greenland), Dominica, Dominican Republic, Ecuador, El Salvador, Federated States of Micronesia, Fiji, Finland, France (including French Guiana, French Polynesia (Gambier, Marquesas, Society, and Tubuai Islands, and Tuamotu Archipelago), Guadeloupe, Ile Amsterdam, Ile Saint-Paul, Iles Crozet, Iles Kerguelen, Martinique, New Caledonia, Reunion, Saint Pierre and Miquelon, and Wallis and Futuna Islands), Federal Republic of Germany, Greece, Grenada, Guatemala, Guyana, Haiti, Honduras, Hong Kong, Iceland, India, Indonesia, Republic of Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kiribati, Kuwait, Liberia, Luxembourg, Mexico, Monaco, Netherlands, Netherlands Antilles, New Zealand, Nicaragua, Norway, Panama, Paraguay, Papua New Guinea, Peru, Philippines, Portugal, Seychelles, Sierra Leone, Solomon Islands, Republic of South Africa, Spain, St. Lucia, St. Vincent and the Grenadines, Surinam, Sweden, Switzerland, Thailand, Trinidad and Tobago, Tuvalu, United Kingdom (including Bermuda, British Virgin Islands, Cayman Islands, Channel Islands [including Guernsey and Jersey], Falkland Islands [including South Georgia Islands and South Sandwich Islands], Great Britain, Gibraltar, Hong Kong, Isle of Man, Monserrat, Northern Island, Republic of the Marshall Islands, Saint Helena [including Ascension Island, Gough Island, and Tristan Da Cunha Island] and Turks and Caicos Islands), Uruguay, Venezuela and Yugoslavia.

A reciprocal permit is valid for one year or until the expiration date on the alien's amateur service license, whichever comes first. An alien may apply for the permit by sending a completed FCC Form 610-A application and a photocopy of the alien's license to FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245, U.S.A. The form is available from the FCC Consumer Assistance Branch at the same address or, in some cases, from United States missions abroad.

A reciprocal operating permittee is authorized to operate an amateur station in areas where the amateur

service is regulated by the FCC. Such operation must comply with Part 97 of the FCC's Rules and the International Telecommunication Union *Radio Regulations*. Operator privileges are those authorized by the alien permittee's own government, but do not exceed those of the FCC Amateur Extra Class Operator.

The call sign transmitted in the station identification procedure is that issued by the licensing country, preceded by an appropriate letter-numeral indicator, separated by the slant mark (/) or any suitable word that denotes the slant mark. At least once during each intercommunication, the alien amateur station must include, in the English language, the geographical location as nearly as possible by city and state, commonwealth or possession. The station location letter-numeral indicators are the letter "W" followed by the geographical number. (i.e.: W5.)

No United States citizen, regardless of any other citizenship also held, is eligible for an FCC-issued reciprocal operating permit. Any person, however, except a representative of a foreign government, may apply for an FCC amateur service license upon passing the qualifying examinations. Alien amateur operators who will be in the United States for extended periods of time are encouraged to obtain an FCC amateur service license. An alien holding an FCC amateur service license is not eligible for a reciprocal operating permit. When an alien obtains an FCC license, it supersedes any FCC-issued reciprocal operating permit held.

## INTERNATIONAL ARRANGEMENTS

The following arrangements have been made for amateur stations regulated by the FCC to communicate with amateur stations located in other countries. **Permissible countries:** Section 97.111 authorizes an amateur station licensed by the FCC to exchange messages with amateur stations located in other countries, except those in any country whose administration has given notice that it objects to such radiocommunications. Currently, there are no banned countries.

**Types of messages:** Section 97.117 stipulates that amateur station transmissions to a different country, where permitted, shall be in plain language and shall be limited to messages of a technical nature relating to tests and to remarks of a personal character for which, by reason of their unimportance, recourse to the public telecommunications service is not justified.

**Third party communications:** Section 97.115 authorizes an amateur regulated by the FCC to transmit a message from its control operator (first party) to another amateur station control operator (second



party) on behalf of another person (third party.) No amateur station, however, shall transmit messages for a third party to any station within the jurisdiction of any foreign government whose administration has not made arrangements with the United States to allow amateur stations to be used for transmitting international communications on behalf of third parties.

The following countries have made the necessary arrangements with the United States to permit an amateur station regulated by the FCC to exchange messages for a third party with amateur stations in:

Antigua and Barbuda, Argentina, Australia, Belize, Bolivia, Bosnia-Herzegovina, Brazil, Canada, Chile, Dominican Republic, Ecuador, El Salvador, The Gambia, Ghana, Grenada, Federated States of Micronesia, Nicaragua, Panama, Paraguay, Peru, Philippines, St. Christopher and Nevis, St. Lucia, St. Vincent and the Grenadines, Sierra Leone, Swaziland, Trinidad and Tobago, United Kingdom (special event stations with call sign prefix GB followed by a number other than 3), Uruguay and Venezuela.

The United Nations also has arrangements with the United States to permit an amateur station regulated by the FCC to exchange messages for a third party with amateur stations 4U1ITU in Geneva, Switzerland, and 4U1VIC in Vienna, Austria.

No amateur station regulated by the FCC shall transmit messages for a third party to any amateur station located within the jurisdiction of any foreign government not listed above. This prohibition does not apply to a message for any third party who is eligible to be the control operator of the station.

### **NOTICE OF PROPOSED RULE MAKING ON NEW AMATEUR IMMEDIATE OPERATING AUTHORITY**

On November 4, the FCC released the text of their proposal to "**Extend Temporary Operating Authority to New Amateur Operators.**" The NPRM was in response to a June 28, 1993 petition (assigned RM-8288) filed by the Western Carolina Amateur Radio Society/VEC, Inc. (WCARS.)

WCARS believes that "...by providing immediate temporary operating authority to all successful examinees, the Commission would be rendering a great service to new members of the amateur service community. During 1992, 44,738 persons passed the examinations for new amateur operator licenses. With such authority, a person who passes the examinations would not have to wait to receive the license (from four to eight weeks) before commencing operation. WCARS also states that providing temporary operating authority would result in a cost savings for the Commission because there would be a reduction in the number of inquiries by persons checking on the status

of their license applications. Amateur operator license applicants make approximately 11,000 status inquiries annually. Answering such inquiries diverts resources from the processing of license applications."

"The [six month] temporary operating authority, however, would not be available to any prior amateur service licensee whose license was revoked, suspended or surrendered for cancellation following notices of revocation, suspension, or monetary forfeiture proceedings. ...Neither would it authorize any station operation that may have a significant environmental effect as defined [in the Rules.] Also the temporary authority would terminate, if the application is returned without action..."

"...there is ample precedent for enacting rules that provide for conditional operation of a private radio station pending final grant of an application. We previously have adopted rules to permit applicants in the Citizens Band Radio Service, the Maritime Services and the Private Land Mobile Radio Services to engage in temporary operation pending final grant of their applications. In those instances, the Commission found that such a procedure would advance significant public interest objectives.

"For purposes of over-the-air identification, we propose that stations that are operated by a new control operator exercising temporary operating authority shall use a temporary call sign determined by the person's [three] initials and mailing address. [The letter Z would be used if the person has no middle name.] The prefix for each such call sign would be WZ. This unique prefix would identify the station as a new amateur station awaiting a license. The prefix would be followed by the number corresponding to the VEC Region for the mailing address shown on the license application. The VEC regions are listed in Appendix 2 of Part 97. [Region 1 to 9 correspond to current amateur call sign districts, Region 10 corresponds to call sign district Ø, Region 11 is Alaska, Region 12 is Puerto Rico and the Virgin Islands, Region 13 is Hawaii and various Pacific possessions.] The person's initials and an indicator denoting the license class would follow the VEC Region number."

New Section 97.9(c) would read: "A person not holding a valid amateur operator license who has properly filed with the administering VEs an application, received on behalf of the FCC, for a new operator/primary station license that the FCC has not yet acted upon, and who holds a CSCE indicating that the person has passed the necessary examinations within the previous 120 days, is authorized the frequency privileges specified in §97.301 for the operator class for which application was made..."

(Comments Close: Jan. 10, 1994. Replies: Feb. 10, 1994)

## UPDATE ON "TALKING TO McDONALD'S COSTLY"

Do you remember the story we did about the amateur who tuned his hand-held transceiver to the frequency and PL access tones of a Dallas drive-thru McDonald's fast-food restaurant this past summer?

**Terry Van Sickle, WB5WXI**, is a "graveyard shift" video journalist for the local ABC television outlet, WFAA-TV Channel 8. Or at least he was until August 22nd when he was detained in the wee hours of the morning by the Federal Bureau of Investigation.

It seems that the restaurant manager complained to the FBI that someone was broadcasting what a Dallas newspaper called "rude and racially offensive" remarks to customers over their menu sign board. FBI agents found Van Sickle and another ham friend parked across the intersection at another fast food restaurant.

Their car was easy to spot. It was adorned with seven antennas and full of sophisticated radio scanners, frequency lists and transmitting equipment ...tools of the trade used by Van Sickle to sniff out and locate news scenes. Over the years, Terry got to be very good at it. Under FBI interrogation and afraid of losing his job, his "ham friend" implicated Van Sickle and provided a written statement to the FBI..

On October 18, Van Sickle was charged in U.S. District Court for the Northern District of Texas with "...knowingly, willfully and maliciously causing interference to a station authorized under Title 47, U.S.C. by the Federal Communications Commission..." He was arraigned by the U.S. Attorney on October 27.

Van Sickle pleaded guilty, agreed to a plea bargain arrangement and was released. Sentencing is set for January 12, 1994, at 1:30 p.m.

Court documents indicate that Van Sickle obtained the McDonald's radio frequency approximately January 1992 and "...periodically and continuing at least through August 22, 1993, the defendant positioned his automobile containing a radio transceiver tuned to the drive-thru frequency close to the restaurant. At times he was accompanied and aided by an acquaintance. From there he was able to see customers as they placed their food orders although they were unable to see him. At such times, the defendant would broadcast his voice over the drive-thru speaker and interrupt the customer's order and willfully interfere with the authorized and licensed communications of the restaurant on its assigned frequency."

The maximum penalty the court can impose is one year imprisonment to be followed by one year supervised probation plus a \$100,000 fine. "There have been no representations or promises from anyone as to what sentence this court will impose."

Van Sickle also agreed "to surrender to the govern-

ment all interest in and ownership of evidence seized from his possession at the time of his arrest." The confiscated radio equipment is worth about \$15,000.

## RADIO CALL FOR ASSISTANCE ON PUBLIC SAFETY FREQUENCY GETS FCC'S ATTENTION

The Nov. 2nd *San Diego Union-Tribune* newspaper carried a very extensive (six columns wide and 10 inches deep) account on how San Diego radio amateur, **Chris Boyer, KC6UQG**, had his ham radio "confiscated" after he used it to summon emergency medical help for a seriously injured and badly bleeding friend by accessing a Sheriff's Dept. radio frequency.

The FCC Engineer-in-Charge is quoted in the story (which, it turns out, was written by one of Boyer's friends) as saying "...this kind of operation is strictly prohibited. We can't have everyone using police or sheriff's frequencies. If this continues, we're going to have chaos for the law enforcement system." Boyer admitted that "...he had modified his radio to allow access to frequencies it is illegal for him to use."

The article says that Boyer first tried to use ham channels to reach help for the bleeding buddy injured in a mountain biking accident. He reportedly tried five different amateur repeaters, a commercial repeater of a radio station where he works and cellular telephone but was "...unable to connect with anyone" because he was in a ravine.

About two weeks after the incident, Boyer received a letter asking him to meet with the Sheriff's Dept. and an FCC representative and to bring the radio along. While Boyer's "...intentions were commendable, his actions could subject him to heavy fines, forfeiture of equipment and imprisonment" the letter added.

The story said a sheriff official believes "Boyer got off lucky by simply having to forfeit his radio, which will cost up to \$500 to replace. If he had been prosecuted by the federal government, he could have faced up to one year in jail and a \$100,000 fine." Further on in the story, it mentioned that Boyer "...had to sign an affidavit" saying he "...voluntarily gave up his radio."

We called the San Diego FCC office and spoke to Jerome Man, the FCC engineer involved in the incident. Man (who is also K9AAH) said that he could not yet comment on the episode "...because we have an open case pending." It is apparent, however, that there is more to this story than is contained in the account written by Boyer's reporter friend. The FCC engineer said ham radio operators may use amateur frequencies but may not access out of band spectrum even when safety of life and protection of property situations arise. The engineer promised to FAX me more on this case once FCC action becomes public.