



### THE VERNAL EQUINOX



*Queens at the equator, March 21, 1978*

A trip to the line of the equator is a must for all visitors to Quito. It is just a few miles north of the city and the distance can be covered in less than half an hour. What used to be a rough and bumpy ride over a winding cobblestone road is now an enjoyable experience. In recent years a four-lane divided highway has been constructed from the northern edge of the city to the monument which was erected on the line of the equator in 1937. The new highway by-passes the little town of San Antonio de Pichincha which is situated about half a mile east of the monument. San Antonio is also divided by the equatorial line, part being in the northern hemisphere and part in the southern.

Many visitors will be found at the equatorial monument any day of the year. They are busy taking pictures of the monument and of groups standing on the equator. They can cross the line from one hemisphere to the other as often as they like. Some couples want their pictures taken holding hands across the line. There is even a small post office where letters and cards can be mailed which bear the cancellation indicating that they were mailed from the middle of the world. A

number of small shops sell souvenirs, including replicas of the monument made of wood or stone.

For anyone with a scientific mind, the ideal day to visit the equatorial monument is March 21st. This is the vernal equinox, the day the sun crosses the equator on its way north. In the northern hemisphere it is a day that is welcomed by many as the first day of spring. Warm weather cannot be far away. On March 21st, exactly at noon, the sun is directly overhead in San Antonio and a vertical object will not cast a shadow.

The residents of San Antonio celebrate this day each year. Right at noon there is a parade followed by a ceremony at the base of the monument. Four young ladies are chosen by vote to be the queen of the equinox and her court. In earlier years the Quitus Indians, and later the Incas, worshipped their sun god in this area. They believed it would be a help to their health and future to bathe in the sun at noon on March 21st. Many travelled to this locality during March of each year. A mountain to the west of the monument has been given the name, The Mark. The Incas knew this mountain as the place where the sun passed over their territory.

The present equatorial monument was constructed at the site determined by a group of French scientists about the middle of the eighteenth century. It stands at an altitude of 8,146 feet above sea level and the longitude is 78° 27' 18" west of Greenwich. At this site a magnetic compass will point 6° 38' east of north.

DXers are concerned with the effects of the seasons and the position of the sun on shortwave reception. However, most of those who visit the equatorial monument don't give that a thought. They are more interested in the historical and

geographical aspects of the area. In order to increase the interest of tourists and to encourage them to spend more time at the equator, plans are underway to improve the facilities. About ten acres will be included in the plans. There will be a first-class hotel as well as exhibits depicting the history and geology of the region. There will be exhibits by local artisans showing their typical and colorful handicrafts. Some of the land will be transformed into gardens. As a start, a sum of about one-million dollars will be spent to make this area a place that you won't want to miss when you visit Ecuador!

## INVISIBLE ANTENNAS

Imagine yourself as one of the world's most enthusiastic shortwave listeners. You've just received that new FRG-4000 you've been waiting for and you can hardly wait to try it out. There is just one problem—a good antenna! If you live in a more rural area you are fortunate. You can string a wire from the house to the barn. But if you are an inmate of one of those concrete-and-steel apartment jungles, you have a more serious problem. Don't get discouraged because there are ways of making invisible antennas!

Some DXers have tried rather bizarre types of antennas. One even tried to use the steel beams of the elevator shaft. Another experimented with the fire escape. A more orthodox solution is to use a fine-wire antenna. Using any magnet wire from No. 18 on down, you can construct an antenna that is virtually invisible. The main consideration is how fine a wire you can use and still expect the antenna to support its own weight. One shortwave listener used a strand of No. 24 wire to erect a random-wire antenna about 65 feet long. He found

that the enamel color of the wire blended perfectly with surrounding brick buildings. His only problem was that he installed the antenna on Halloween and was mistaken for a prankster. The antenna works well and it is not likely that it will be noticed.

It's senseless to put up a fine-wire antenna and then load it down in both weight and visibility with large glass or ceramic insulators. Quarter-inch styrene tubing, available at your local radio supply store, is the answer. For end insulators, saw off pieces about two-and-a-half inches long. Drill a 1/16-inch hole in each end for the wire and you have a miniature, almost transparent, insulator. To fasten the ends of the wire, use ordinary TV lead-in insulators of the screw or masonry nail type. Besides holding well, they make the whole assembly look less suspicious because such stand-offs are found everywhere.

Another idea for shortwave listening which will give good results, especially if you live on an upper floor of the building, is to merely drop the end of the antenna wire down from an insulator near your window. Put a small styrene insulator on the far end to give sufficient weight to stretch the wire straight. Another short piece of styrene tubing makes an excellent feed-through insulator. Drill a small hole through the window sill or other convenient spot and line it with tubing before threading the wire through the hole into your room. If you do most of your listening at night, you can even pull the antenna in during the day and hang it out again at night!

Reactance rises sharply as wire gauge goes up and the wire itself becomes smaller. The smaller the wire, the more problems you'll have in making a good impedance match. You will find an antenna tuner will greatly improve the reception you get with a simple invisible antenna.

We have heard of some DXers who have taken a sudden patriotic turn. They have bought a flagpole and mounted it in a bracket centered on the window sill. The flagpole extends at about a 45-degree angle from the horizontal. Who would suspect that the flagpole is actually a shortwave receiving antenna? Of course, the flagpole must be made of metal tubing. Another way of doing it is to stretch a wire "brace" from the end of the pole to a screw eye in the top of the window frame. The wire "brace" is actually a shortwave receiving antenna.

### ANDEX International—

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HCJB



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If your friendly landlord permits the mounting of TV antennas on the roof, so much the better. You may find that a simple TV or FM antenna will give you good shortwave reception in addition to picking up the stations they are designed for. The suggestions given in this article are just a starting point. With a little ingenuity you should be able to come up with an invisible antenna for your difficult location that will give you good shortwave reception. If you find some unusual solution, let us know about it. We'd like to pass it on to other DXers who might be able to profit by your experience.

## BORN TO WIN

In our success-oriented culture, our acclaim is for winners. No one wants to be a loser. The constant loser is pitied and scorned. It's for him that we reserve the bleak description—a born loser. Losing out has become his way of life. By nature, we like to be identified with life's winners and with successful people. There is little chance that to impress people we will sprinkle our conversation with the names of losers we have known.

One reason people were taken aback by Jesus Christ was that he had a genuine concern for life's losers. His critics charged that "he was associating with such despicable people, even eating with them!" (Luke 15:2). Jesus was not disturbed about what his concern for losers might do to his image. He candidly acknowledged, "I came to save the lost" (Matthew 18:11). Imagine that! Here was someone whose mission was specifically to life's losers. In fact, he had a distinctive outlook: "I did not come to call the just, but sinners, to repentance" (Luke 5:32).

In God's sight, none of us is a winner. Each of us has sinned and fallen far short of God's standard. Deep down we recognize that when we compare ourselves to that ideal, we're losers!

Jesus told a story of two men who went one day to the Temple. One fancied he was a real winner and he advertised his successes to God in "prayer." The other was a loser and knew it. All he could blurt out was, "God, be merciful to me, a sinner" (Luke 18:13). The loser won out! God heard his prayer and he was saved. None of us can ever know God in a real sense and experience peace and joy until we admit our need and turn to Christ who cares for losers.

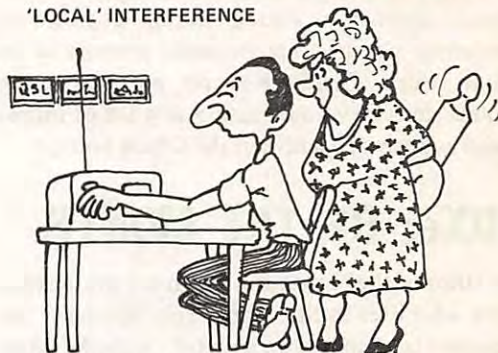
"Seek the Lord while you can find him. Call upon him now while he is near. Let men cast off their wicked deeds; let them banish from their minds the very thought of doing wrong! Let them turn to the Lord that he may have mercy upon them, and to our God, for he will abundantly pardon!" (Isaiah 55:6, 7).

Turn to God now by accepting his Son, Jesus Christ, as your Savior. He will cleanse you from all wrong and make you a new person inside. It will be just like starting all over with a new birth and a new life (2 Corinthians 5:17, 18). Be born again and become a winner! (John 3:3, 5).

From "Have a Good Day," used by permission  
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## CARTOON CORNER

'LOCAL' INTERFERENCE



Cartoon idea by Rober Tessier

ANDEX No. 2831 of North Battleford,  
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## DX DANGERS

DXing is not considered to be a dangerous hobby. It's not like drag racing or mountain climbing. However, there are some things you need to look out for. Lightning is one of the dangers in the hobby. Especially if you use a large outdoor antenna. Clayton R. Stapleton, ANDEX member No. 2651, who lives in New Braunfels, Texas, relates his recent sad experience.

"Recently I did something very foolish. I decided to listen to the DX Party Line on a Saturday evening. My Truetone DC-1270 shortwave receiver was picking up HCJB beautifully. However, there was a terrible Texas-size thunderstorm that night. Clayton Howard was just welcoming us to the program and asking us to write, when, all of a sudden, a flash of lightning went by my window. My radio went dead. I looked out the window and saw that my ground wire was disconnected and the light-

ning had burned out my receiver. Until I get my radio fixed, the only way to keep in contact with HCJB is through the ANDEX bulletins. Here is a word of wisdom for fellow DXers. Be sure your ground wire is connected or you may not hear Clayton Howard's voice anymore!"

We can only emphasize what Clayton Stapleton has said. Be careful when thunderstorms approach your area. They contain a lot of energy and can damage your equipment in a flash. We would go even further than Clayton and recommend that you use a good lightning arrestor with your receiver. Better yet is a switch that will disconnect the antenna from your receiver and fasten it directly to the ground. Leave your antenna disconnected and grounded whenever you are not using your radio and, especially, whenever you are away from home. If you want to listen to your favorite shortwave station during a storm or threatening weather, use an inside antenna or the built-in whip. These are simple, inexpensive suggestions, but they could save you a lot of money as well as keep you active in the DXing hobby!

## DXer OF THE MONTH

Our DXer of the Month for March is a professional writer who lives in Ste. Genevieve, Missouri. Ste. Genevieve is a small town situated on the Mississippi River at a spot about fifty miles south of St. Louis. Bob Hammack formerly worked as a public information officer at the Ozark Folk Center in Mountain View, Arkansas, in the heart of the Ozark Mountains.

Bob has had a long history of involvement with the Boy Scouts. As a young man he earned the rank of Eagle Scout, which is no easy accomplishment as anyone in the scouting movement knows. The same abilities that helped him advance in the Boy Scouts have carried him far in other fields as well. He is still involved in the scouting program as a unit commissioner, assistant scoutmaster, and temporary cub master. He feels this is one way he can repay the Boy Scouts for all they did for him as a child. Other hobbies include hiking, stamp collecting, coin collecting, and, of course, DXing. Bob received the Missouri Writer's Guild Poetry Prize in 1976 for one of his poems. This was his first professional writing award.

Bob uses a fairly old Hallicrafter S-40B receiver for his shortwave listening. This is a tube-type



*Bob Hammack tuning his S-40B*

radio but has given him good results. For an antenna he has used a random-wire type but a new multi-band system is being constructed. He has been interested in shortwave radio since he was an elementary-school student. HCJB was the first shortwave station he ever heard. That was back in 1958, more than twenty years ago! During the past year he has heard 54 countries on his S-40B and has received 40 verifications. He still has hopes of hearing from others. Some of his prized QSLs include those from the Falkland Islands, Lithuania, Papua New Guinea, and the Venezuelan time station YVTO. He does most of his listening during the local evening hours, 2300 - 0400 GMT.

Another of Bob's accomplishments is photography. The picture showing him with his S-40B was taken by himself. He suspended the camera and flash in such a way that he was able to get in the picture. He then did his own developing and enlarging.

Bob joined ANDEX about a year ago. He is member No. 2897. Other clubs he has joined include the Radio Prague Monitor Club, the Radio Budapest Shortwave Club, and he is an auxiliary monitor for WYFR. As a scout many years ago he was also a member of the Boy's Life Radio Club.

Bob Hammack is a man of many accomplishments. However, he says his greatest pride is having a most giving and loving wife, Patti, and daughter, Genevieve. Living in Ste. Genevieve, his daughter is well named. She is two years old and goes by the nickname, Bean.

ANDEX and all its members wish Bob Hammack the very best during the coming years.