

# The Framingham Circuit

Newsletter of the Framingham Amateur Radio Association January 2001, Vol. 68, No. 1

---

## In This Issue

**President's Message**

**This Month's Meeting**

[Page 2-](#)

**First Impressions**

By Charlie, NC1N

[Page 3-](#)

**QSL Card**

**FARA - The Early Years  
and more...**

## Thursday, Jan 4

**This Month's Meeting**

Show and Tell night, see the article for more information.

## Submitting Material to the Circuit

Material may be submitted for publication by sending it directly to the editor. This can be done by phone, by US Mail, or via the Internet (preferred). The deadline for each issue is the *Wednesday*, one week before the monthly meeting.

### by phone

Home:

(508) 435-2055 (before 9:00PM please!)

College:

(508) 910-5689

### by mail

Robert Hess, N1UVA  
1 Cold Spring Brook Road  
Hopkinton, MA 01748

### by internet

[n1uva@ultranet.com](mailto:n1uva@ultranet.com)

## President's Message

Happy *Real* Millennium! Last year, as we all know, was just a rehearsal. The real start of the twenty-first century was January 1, 2001.

I'm fully aware that it's only by chance that I'm the one writing this. However, since someone in the future may decide to publish something from this issue of the *Circuit*, I'll try to make this an above average message.

If we look back to the beginning of the century, we find Marconi making the first practical commercial use of radio. Over the subsequent years, radio has saved lives, won (and lost) wars, and fundamentally changed the way we live. Think for a moment, how life would be without almost instantaneous worldwide communication. Morse (some say it was really Vail's work) code is still being used, over a hundred years after its invention, and was only commercially discontinued a few years ago.

Now, try to imagine how radio will change in the coming century. We already have a good start on a global network of wireless phones (even without Iridium and Globalstar). The next step appears to be high quality wireless networks. We already use a 2.4 GHz wireless LAN at work. Non-ham amateurs are building public, unlicensed, wireless networks in some high-tech areas. Will we see a Linux-like wireless infrastructure develop?

How does all this fit in with ham radio? Well, those wireless designers have to come from somewhere. The refrain over the past few years has been, "we're losing those kids to computers". In fact, the most valuable engineers in the coming century may be those who know both computers and radio. Take a look at the most popular methods of ham communication. Almost all of them use computers. And the two newest HF data modes, PSK31 and MFSK (see QST for January 2001) both use general purpose computers and sound cards to eliminate the need for a separate modem. Just plug the radio right into the computer. All the work is done with digital signal processing. The newer multi-mode cellular equipment uses DSP receivers, too. And people with computers want to network them, preferably, without paying an arm and a leg. Check out the web, and notice the interest in 2.4 GHz wireless networking cards and dish antennas.

Ham radio is alive and well, because there will always be curious, inventive people, who want to try something new. Marconi would feel right at home. Happy New Millennium!

Peter, KA1AXY

## This Month's Meeting

This month's meeting is a Show-and-Tell night. We haven't had one of those in a long time. If you have something of interest to the group, please bring it with you to January meeting and be prepared to say a word or two about it. Perhaps a cool ham radio holiday present you received? Maybe a homebrew project? Pictures? A "guess what it is" electronic part? An antique radio? Use your imagination. If you don't have something, just join us at the meeting....you never know what shows up on Show-and-Tell night!

## This Could Be Your Last Circuit!

I'd like to remind those of you who haven't yet paid your 2001 dues, that we need to have them as soon as possible. That's so we can make sure you get your February issue of the *Circuit*.

## First Impressions of the Yaesu FT-1000MP

By Charlie, NC1N

For years, I had been dreaming of buying a Yaesu FT-1000MP. I recently made the leap and bought a near-mint used one. Some folks who saw e-mail about my first reactions suggested I package it up as an article for the Circuit.

The 1000MP, while it shares a model number with Yaesu's top-of-the-line FT-1000D, is actually more of a distant cousin than a close sibling. However, the brand-new FT-1000MP Mark V is a close relative. The Mark V is derived from the original MP, but adds additional power, a Class A amplifier, and additional filtering. It also adds \$1000 to the price. The Mark V accepts the same optional filters as the original MP. We're likely to see some additional MPs coming on the used market due to the Mark V's introduction.

This review covers the original MP. I expect we'll see more of them on the used market with the introduction of the Mark V. But the MP, Mark V, and 1000D will all continue to be offered for sale by Yaesu for the time being. (The original FT-1000 is being discontinued) The 1000MP, like the 1000D, has dual receivers. You can receive on two frequencies at the same time. Unlike the FT-1000D, you are limited to receiving on the same (or very close) bands... the receivers share the same front-end band pass filter.

The MP provides cascaded IF filters (filters in two successive IFs) on the main receiver: 2.4 kHz SSB cascaded filters are standard; there are unpopulated slots for 2.0 kHz SSB filters; there are slots for 500 Hz CW filters (one comes standard); and there are unpopulated slots for 250 Hz CW filters. The subreceiver has a standard 2.4 kHz SSB filter and a slot for a 500 Hz CW filter. Most hams buy their add-on filters from

Inrad, rather than Yaesu--they're cheaper, and reportedly, better. (I stretched my budget to the breaking point buying the stock radio; I'll be adding filters later).

The 1000MP features integrated digital signal processing (DSP). It's pretty useful. On CW, it provides an effective 240 Hz filter and is usable also on 60 Hz and 120 Hz. The bandpass filtering is less critical on SSB, but works well. Noise reduction, while not perfect, is quite good. The auto-notch is quite effective in subtracting carriers automatically. The downside of the MP's DSP is that, while it's driven by a DSP detector that operates on the final IF, it functions as an audio DSP that is OUTSIDE the AGC loop. This can lead to some artifacts in the received signal. (The new Mark V has an improvement in this area--it allows you to sync up the DSP bandwidth with the analog IF bandwidth automatically).

Changing parameters on the DSP is not as easy as on a separate DSP unit--you can set up one filter per mode. Actually, you can really set up two--by going from analog to DSP demodulation, you can have it reduce the bandwidth a bit (or not, as you choose). To change settings, you need to go into the menu system. Not hard, once you're used to it--but not as easy as the front-panel controls on a Timewave box. Also, all you can really tweak is the bandpass filter, although for voice modes you can independently set the low and high ends of the filter.

So, for QRM fighting, you have at your disposal:

1. Fixed filters (mostly optional)--very good.
2. DSP filters--very good, but hard to tweak on the fly. Best to pick one per mode and leave it. Easy to turn on and off.
3. IF shift--same as any other radio.
4. IF width--shifts the width from one

side or the other... i.e., similar to IF shift but when you move one side of the passband, the other side stays fixed.

5. Auto notch (DSP)--very good at removing heterodynes.

6. Manual notch (non-DSP)--nothing to write home about.

For noise reduction:

1. Two traditional noise blankers... pretty good.

2. DSP noise reduction--very useful, but doesn't work magic.

The 'MP does SSB, CW, FM, AM, AFSK, and FSK.

For AM reception--which SWLs care about--there are several options.

1. Traditional AM, full carrier.

2. Synchronous AM detection--to fight carrier fading, receives in LSB and re-injects a steady carrier. This can be quite nice.

3. Diversity sideband reception--receive opposite sidebands on each receiver.

4. Diversity signal reception--tune in different frequencies for the same station.

The MP features computer control--very important to testers--and it works well. Mine worked immediately with both CT and DX4WIN, no tweaking.

As a relatively new tester, I had never used computer control before. It is truly neat with CT. Change bands on the radio and CT follows. Change bands in CT and the radio follows. As you tune the radio, the band map follows. Press return while on a station in the band map, and the radio goes there. Of course, there's the infamous Alt + F4 to grab the most-recent needed multiplier. And I'll never again need to type in the frequency when posting a spot!

As for the radio's legendary complexity: It is a very complex radio to SET UP but

Continued on page 3...

### Change of Address

If you would like to change the address on your Circuit label, please email [fara@fara.org](mailto:fara@fara.org). Or, you can call the Club at 508-879-8097

### READ THE CIRCUIT ONLINE... SAVES PAPER AND POSTAGE

Now available as an Adobe Acrobat file email [fara@fara.org](mailto:fara@fara.org) and we'll set you up!

### Membership Dues

Annual membership dues are as follows: (Make checks payable to FARA)  
Regular FARA \$15

## QSL Card

Write-up by Bob, W1RH



The Japanese hams take a lot of pride in their QSL cards. This nice looking card is from Kenichi, JG2MQM and features a picture of Ken in Tiedo, Spain. Thanks to Leo, WA1HAM, for lending this QSL to the Newsletter. Kenichi worked Leo in February, 1999 on 15 meter sideband using a Kenwood TS-850 and a 5 element beam.

*The Circuit is in need of QSL cards!!! If you would like to share your favorite QSL card, which could be your own, with the club, please send it my way! A caption or story would be appreciated also.*

*Don't let not having a scanner keep you from sending in your favorite card. Many FARA Members have access to scanners, including Bob, W1RH.*

...Continued from Page 2

should be no more complex than a 1000D to OPERATE. It's very much like a complex software package with many "tabs" in the "options" dialog box. There are a zillion neat features you can tweak to your wishes.

I recently read a comparison of the hot new Icom IC-756PRO in which the review said that the PRO had every toy he could dream of... but the 1000MP had every TOOL he needed as a contester. With used MP's going for \$1000 less than the PRO, it's an attractive alternative.

### For Sale:

MFJ Multi-band antenna for sale.  
MFJ-1796, 40-6 Meter capacitively loaded, vertical antenna for sale. Practically new; most parts still partially assembled. Reason for sale: just too big for apt. space available. Asking \$130.  
Contact: WA1R (781) 663-4727 (days)  
(508) 879-2087 (evenings)  
email: [m.stern@rcn.com](mailto:m.stern@rcn.com)

### FraminghamARA-L@qth.net

The FARA email reflector is working well. It provides us with an easy way to reach all our members who have email. You have to sign up so it will reach you, though.

To sign up, send a message to [majordomo@qth.net](mailto:majordomo@qth.net) with contents "subscribe FraminghamARA-L". (Without the quotes, of course). The subject can be left blank, the server only looks at the contents of the message. You'll get back a confirmation, follow its instructions exactly, then you're on the list!

## FARA - The Early Years

Transcribed by Karen Hess

*The Framingham Amateur Radio Association, formerly called the Community Radio Association, is fortunate to have the notes dating back to the Club's first meeting. Karen Hess, W1RH's XYL, has transcribed the handwritten notes, verbatim, and they will appear in this and future issues of the Circuit. They make for fascinating reading!*

October 13, 1933

The 12<sup>th</sup> regular meeting of the C.A.R.A. was called to order by Vice Pres. McLean at 8:45 p.m. The report of the Secty. was read and accepted. Pres. LaBarr arriving late took over the meeting and advised the club that Treas. Marcoux would be unable to continue his regular duties and wished for either an assistant or to have the club accept his resignation. Discussion. It was decided to elect a temporary Treas. to become permanent on receipt of formal resignation by Mr. Marcoux. Robt. Reid was nominated by J. D. McLean. Nominations closed. Elected by unanimous vote. The remainder of the meeting was devoted to discussion and advisability of having a regular code class and theory class each meeting night. Mr. Blanke suggested a theory class each meeting night to be held after regular meeting for those who wished to prepare for an amateur license. Mr. Blanke was appointed by Pres. LaBarr to conduct a series of 10 lectures on theory after regular meetings. Mr. Strickland having notified the club of his inability to serve effectively as the publicity committee. J. D. McLean was appointed to fill the vacancy until elections in Jan. Motion for adjournment by Mr. Blanke. Seconded. So voted.

## FARA Horizons

Jan 4: Club Meeting

Jan 22: Board Meeting

### This month's Circuit sponsored by:

WORLDWIDE DISTRIBUTION



Peter Cantara  
Assistant Manager  
K1TM

224 N. Broadway, Salem, NH 03079  
(603) 898-3750 1-800-464-0047  
Fax: (603) 898-1043  
[www.w1rh@narradio.com](http://www.w1rh@narradio.com)

WARREN, OR • ALABAMA, GA • DEERFIELD, CA • DENVER, CO  
NEWCASTLE, DE • OAKLAND, CA • PIERCE, WA • PORTLAND, OR  
SALMON, WA • SAN DIEGO, CA • SUNNYVALE, CA • WOODBRIDGE, VA