

Study on Actual Usage of FT 8 in the US and Japan

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Abstract

This study is based on a demonstration of JT 65 / FT 8 at the 2017/2018 Hamvention, and an accompanying questionnaire given to FT 8 users. The purpose of the questionnaire was to find differences in usage by FT 8 users in the United States and Japan. The study revealed differences in usage frequency between Japan and the US, RF output on the Japan side being higher. We also found that users in both regions recognize a common appeal in FT 8 -- that it allows quick and efficient QSO while reducing language barriers. We also found that many users are spending most of their QSO time on FT 8 and communicating with many DXCC entities. There is also great potential for FT 8 in petition mode.

1. Introduction

At Hamvention we conducted a demonstration of JT 65 in 2017 and real time QSO of FT 8 in 2018. This was transmitted directly from the venue, but was remotely operated with a transceiver at a shack in NY. Figure 1 shows the system configuration. At the same time, we handed out a flyer at the Hamvention booth that explained FT 8. The demonstration was met with great enthusiasm from Hamvention attendees in both 2017 and 2018. A photograph taken up by QST magazine is shown in Fig. 2. There were nearly 500 signatures from attendees over the course of two day. The purpose of the exhibition was to spread to those unfamiliar with FT 8, but for the purposes of the study, a questionnaire was given to FT 8 users. The following is a summary of the study. The data of Japan is based on Facebook and the JT 65 mailing list. The parameters are USA: N = 80, Japan: N = 100.

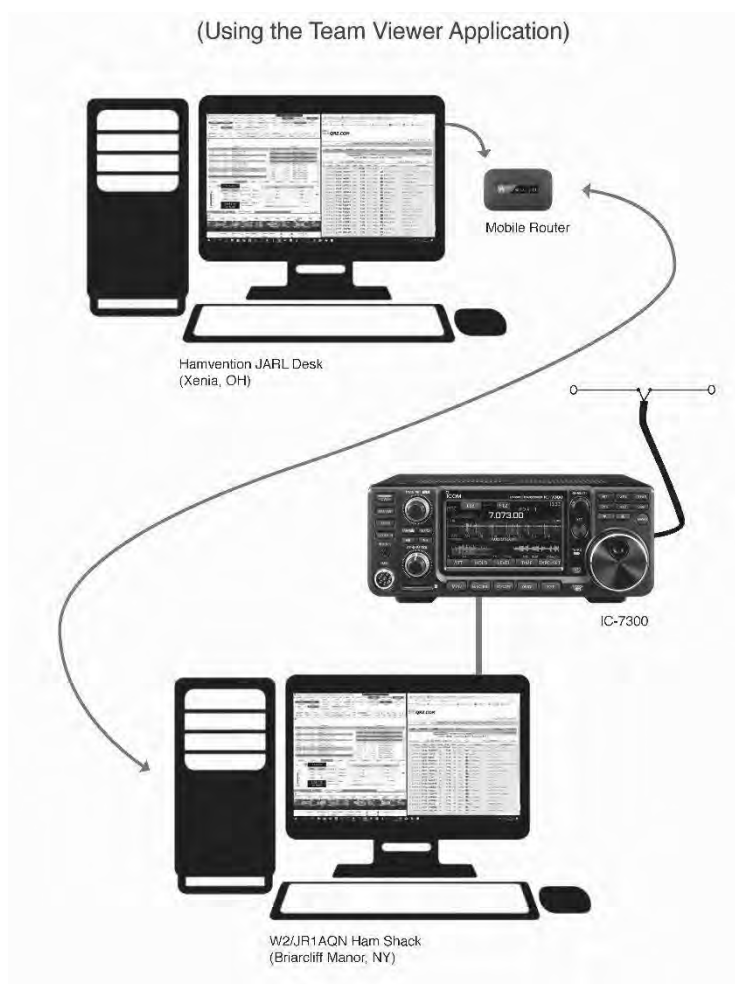


Fig. 1 — FT8 Remote system in Hamvention2018



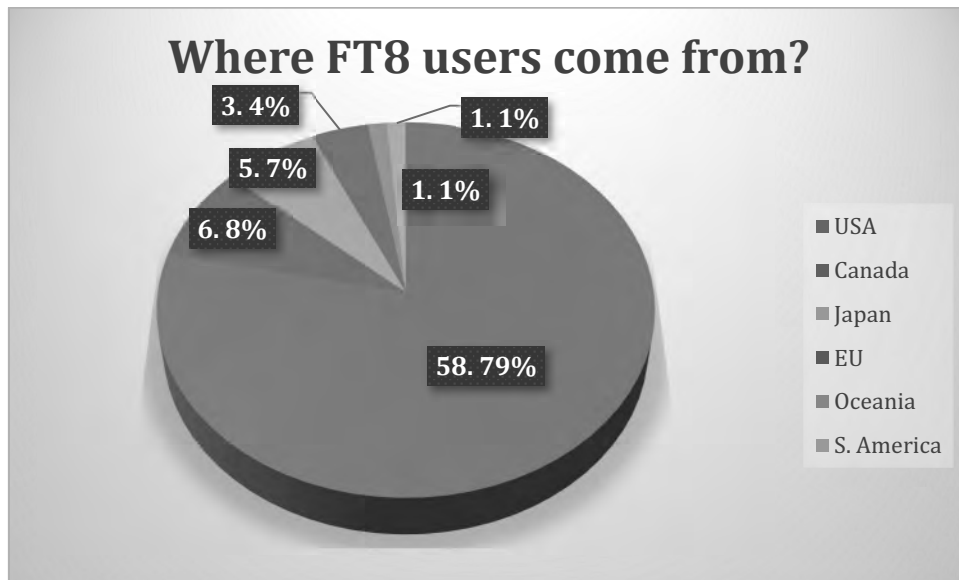
Fig. 2 — Booth photo taken up by QST magazine

2. Questionnaire contents

The contents of the questionnaire are shown below. It gives a broad picture of FT 8 usage in the US and Japan. Participants in both Japan and the US responded very cooperatively and carefully. The following questions and their answers are explained.

2.1 Geographical distribution, Hamvention2018

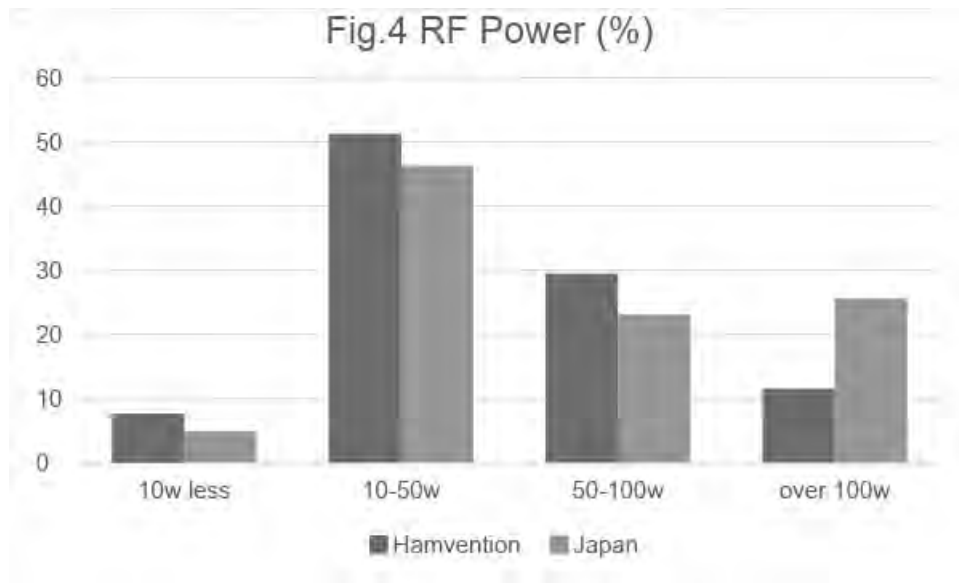
Because Hamvention has visitors from all over the world, I asked the country that they are operating in.



(Fig. 3)

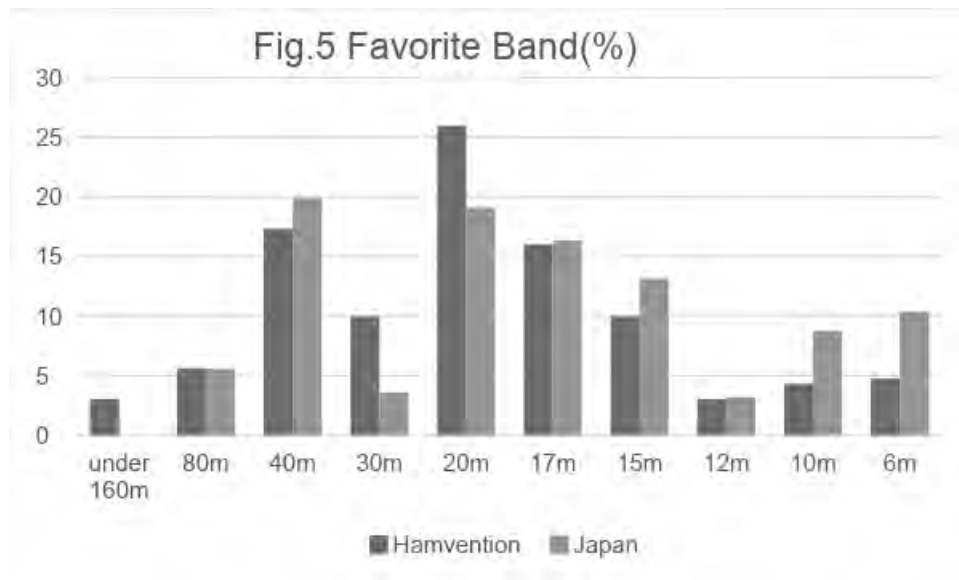
2.2 RF power when you are operating FT8 (Fig. 4)

The study showed an unexpected result that the number of high power stations beyond 100 W is rather high in Japan. In Japan, interference from neighboring high-power stations causes a serious problem. While FT 8 on air stations are still on the rise, harmonious consensus about appropriate RF power is required.



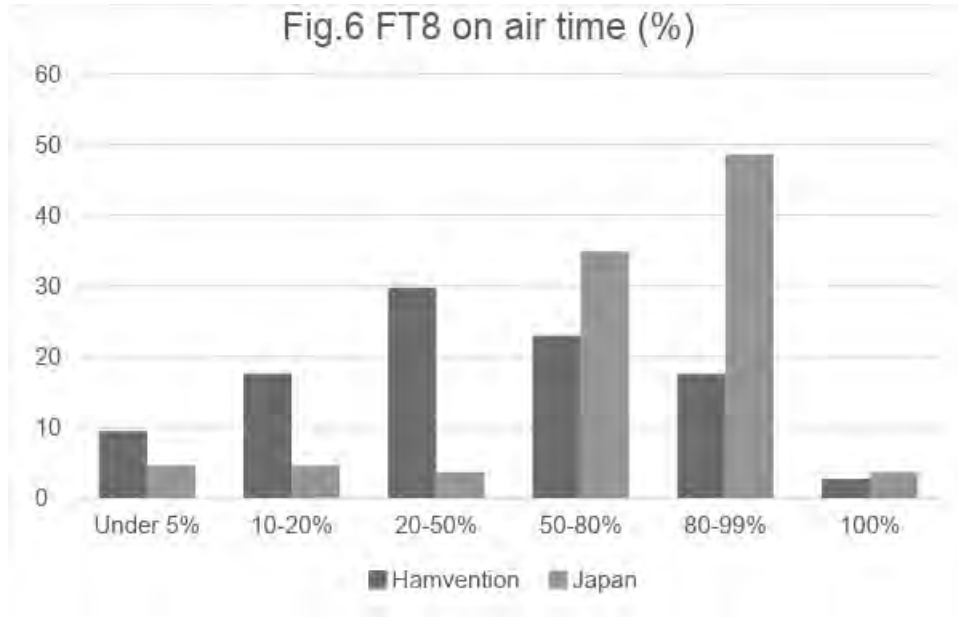
2.2 FT8 Favorite Band (Fig. 5)

Fig. 5 also shows a relatively significant difference. It is to be expected in Japan and the United States that 20 m/40 m is the most common, but the difference in use of the WARC bands, especially 30 m, is remarkable. The fact that there are many high bands overall may be an influence of the housing situation in Japan (Low band requires a large antenna.) The unpopularity of less than 160m bands in Japan, and the popularity of the 6m band may also reflect this. (30m/20m are only allowed for Class1, 2 license holders in Japan)



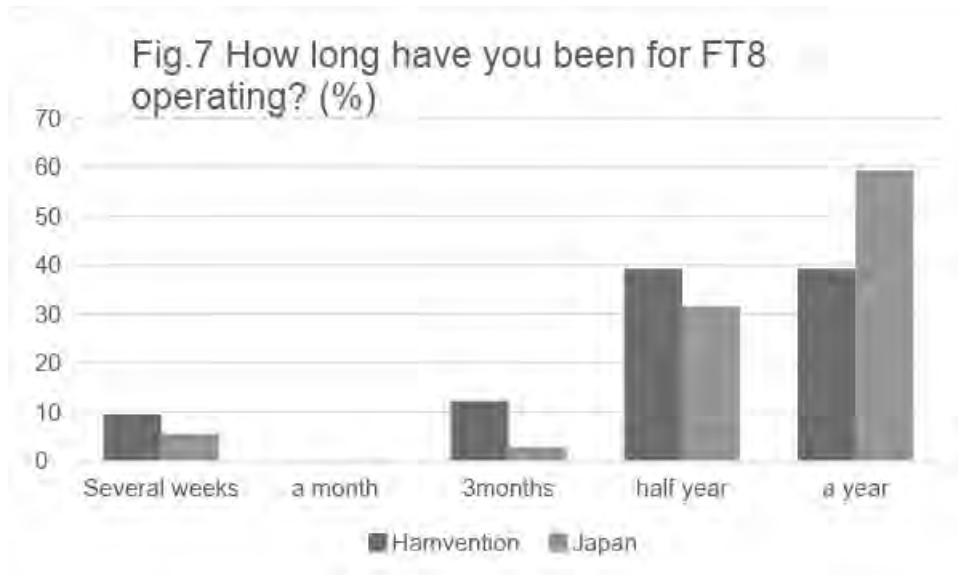
2.3 FT8 % in yours “on the air time” (Fig. 6)

As you can see in both Japan and the US, FT 8 takes up the majority of QSO time. At Hamvention, I noticed that many attendees did not think of FT 8 as a special mode. By contrast, in Japan FT 8 has a devoted following who almost exclusively use FT 8.



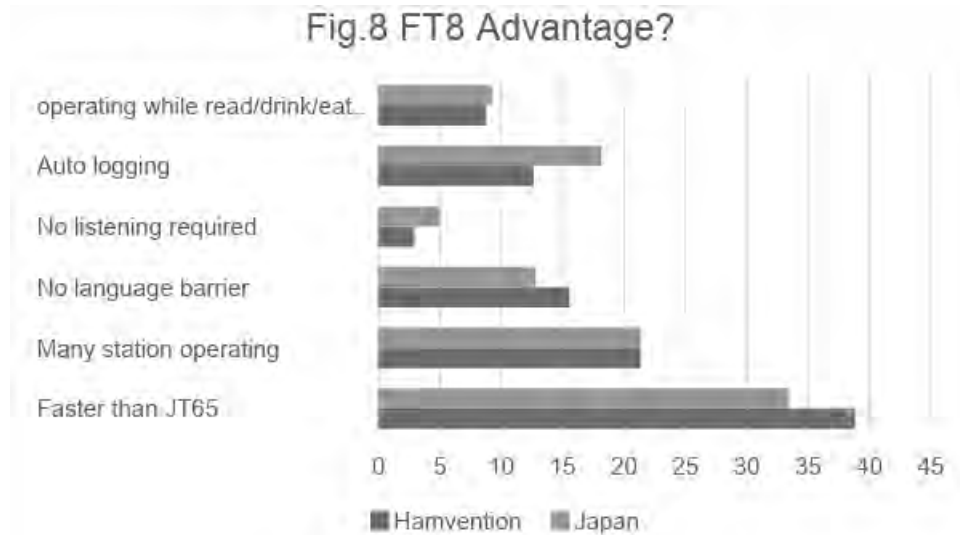
2.4 How long you are operating FT8? (Fig. 7)

Even though FT 8 was invented in 2017 in the United States, it cannot be used without understanding English. This is significant because the figure shows that half or more Japanese FT 8 users have been using FT 8 since its creation.



2.5 What is FT8 biggest advantage? (Fig. 8)

The reason is that QSO is shorter than JT 65. This can be understood from the difference in responses at booths between 2017 and 2018. Last year, there were many opinions that "we do not use it because JT65 is too slow." They understood the benefits of JT 65, but the length of QSO was a barrier. Once QSO length was reduced with FT 8, many more hams entered this mode. Another interesting result is that users in both Japan and the United States listed "no language barrier" as an FT 8 advantage. As a non-native English speaker, I had thought of "language barriers" as an issue that only we experienced. It seems FT 8 leads to a better, more mistake-free experience for both sides.



2.6 How many DXCC you worked by FT8? (Fig. 9)

Although it is a new mode that has only been around for one year, everyone is actively enjoying DX by FT 8 as shown in the figure. I think that it is wonderful that there are users getting results of more than DXCC = 200 in both Japan and the United States. I myself live in the suburbs of NY and I operate it with a dipole antenna set in the backyard, so without JT 65 / FT 8 it would have been impossible to communicate with foreign countries. I am grateful to FT 8 for helping me realize the dream of DX communication.

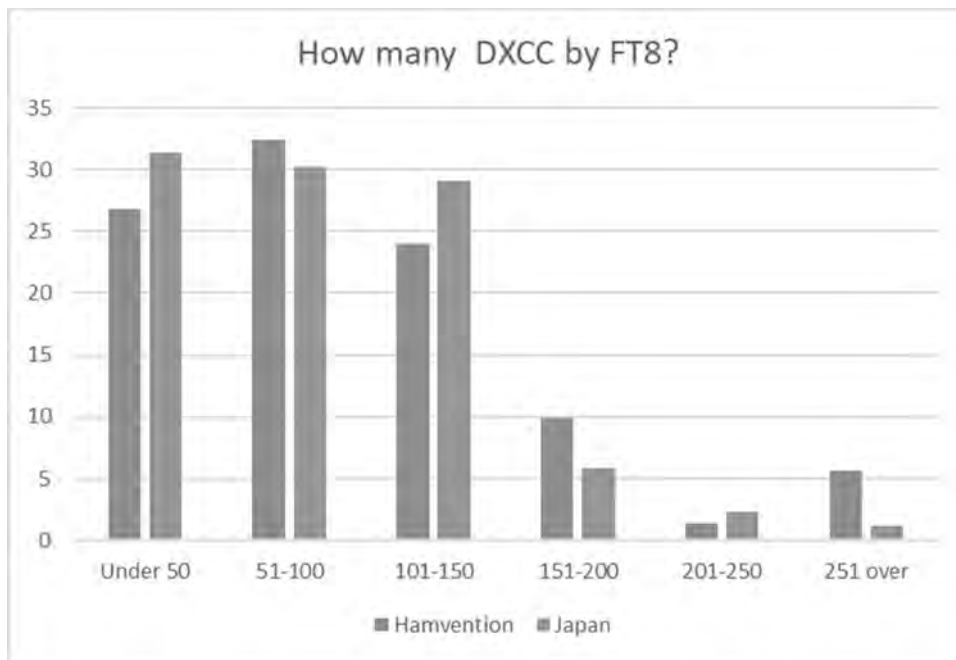
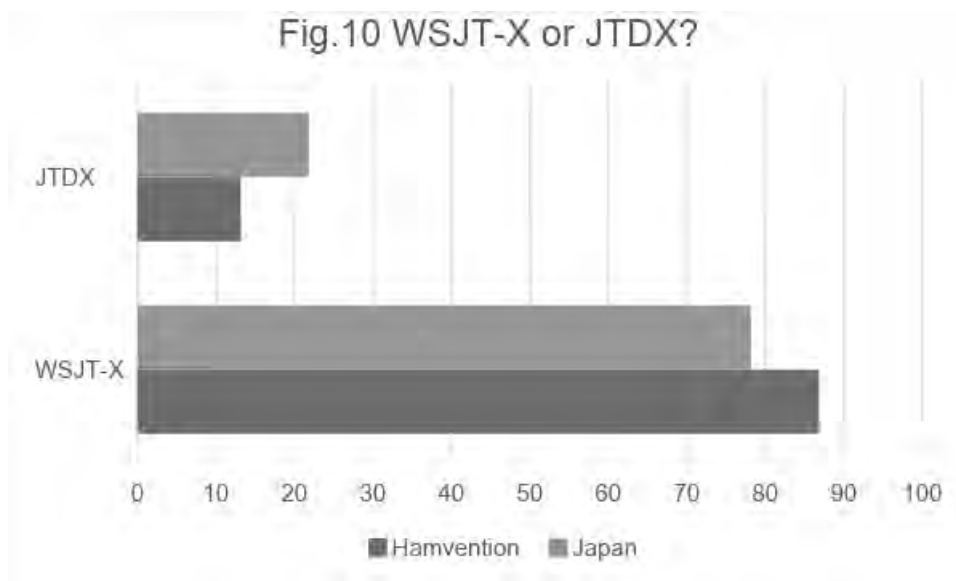


Fig. 9

2.7 Which software you are using for FT8? (Fig. 10)

The ratio of the two-main software used for FT 8 are nearly the same in Japan and the United States.



3. Conclusion

I examined the usage situation of FT 8 mode in the US and Japan to understand the experiences of users in both countries. In comparison to last year, there was more enthusiasm about FT 8 and it was no longer seen as a “minor mode.” On the other hand, this increase in popularity also means that

questions such as appropriate RF output must be discussed. I hope to contribute to the continued development of FT 8.

Reference list

- (1) CQ ham Radio magazine, CQ publishing (July 2018)
- (2) Dayton Hamvention 2018 guide book (May 2018)
- (3) QST magazine, ARRL (August 2018)