



Recommended calling QRGs: 7.026/7.028, 10.118/10.138, 14.058, 18.085, 21.058/21.138, 24.908, 28.058/28.158
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Other members of administration: Sugi JK7UST & Manabu JE1RZR
<http://www.feacw.net/> or <http://www.fists-ea.org/> (Secondary)

NEW MEMBERS

We're very pleased to welcome our latest member: Macky, JO2JIW #15152

MACKY, JO2JIW #15152

Hello FISTS EA members, I am JO2JIW, Macky. I love CW, just like you all. I use TS-480DT, 50 W with a whip made of fishing rod. I enjoy CW QSO on the bands between 7 MHz and 28 MHz. Occasionally, I enjoy outdoor operation using my FT-817 and MP-1 (Super Antenna). Although it is in QRS, I can do simple chats in English CW. I am also capable of operation in Japanese CW. On the weekend, I enjoy communication via CWCOM. Please just call me when you hear my call-sign on the bands.



Easter Island Dxpediton, MASUMI, JA3AVO #15029

We will be active from Easter Island (CE0Y), Jan.10-16 2015. Special thanks to RCCh (Radio Club de Chile)
<http://www.ce3aa.cl/>

[SKD]

2015 Jan. 8 (Tue) Itami → Narita →
9 (Fri) Santiago → Easter Island

10 (Sat) Easter Island
11 (Sun) Easter Island
12 (Mon) Easter Island
13 (Tue) Easter Island
14 (Wed) Easter Island
15 (Tue) Easter Island
16 (Fri) Easter Island

17 (Sat) Easter Island → Santiago →
21 (Wed) Itami

[Call] XR0YJ (Pending) or CE0Y/Home call

[OP]

JA3ARJ Tatsuo Ohkushi
JA3HJI Shozo Nishimura
JA3IVU Jusei Kitai
JH3LSS Kunio Miyagawa
JI3DNN Munakazu Shimatake
JA3AVO Masumi Nakade
JH3PBL Hiroko Nakade

[Freq.& Mode]

80 m – 6 m
CW, SSB, Digital

[Shack]

Hare Kapone

HAM FAIR 2014 TOKYO REPORT, JUN, JQ1BWT #15036

Ham Fair Tokyo was held on the 23rd to 24th of August, 2014 at Tokyo Big Site. FEA had a booth and introduced Mores communication to the attendees. The booth was also a place where CW lovers met each other. Luckily, our booth was located in a corner. Thanks to the easy-to-find location, many attendees who had an interest in mores communication visited our booth.

Throughout the two full days of the exhibition, in addition to the FEA members waiting in the booth, at least one other person, including one belongs to the younger generation, was occupying a seat prepared for the visitors. In addition to the casual greetings between people that know each other, we had many questions on “what to talk about using CW”. This may indicate that there are many people who are interested in CW but still hesitate to be on the band.



JK7UST, JQ1BWT, JR0QWW

Operating on 1.8 MHz, 160 M “top” band

“Top band” is one of the most difficult frequencies to QRV. At the booth, we had QSO using a “dummy load”. As very effective “dummy loads” emit almost no signals, we had to “tune” the setup by adjusting the position of the dummy loads. We felt that even though the two “antennas” were placed at such a close proximity, the “top band” still requires some technique (Hi). As you see, the QSO was performed with 2×KX3s. I was also able to make a QSO at the booth using FT-817.

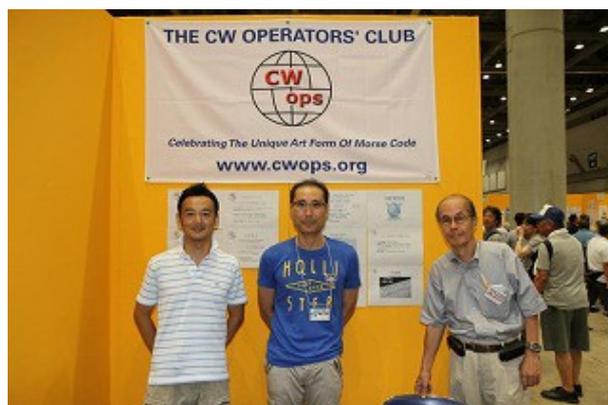


JK7UST, JK1TCV



JH1KMU, JK7UST

The booth in front of us was “CWops”. Of course, we had a QSO between the booths. The display of a real QSO was more effective than we expected and many people, who wish to operate CW on the band, stopped by and carefully listened to the CW sound. For their convenience, we placed a CW decoder at the booth.



JL1IRB, JL1GEL, JA3AVO
(They are FISTS, too.)

ICOM IC-7850

ICOM's 50th anniversary special model. Limited number of units (150) will be sold worldwide. A consumer model, which is identical except for the appearance of the panel, will also be released soon.



YAESU FT-991

This is a 1.8 to 430 MHz All mode transceiver which accommodates 144/430 C4FM Digital. It will be released in 2014. I put my FT-1D on top of it in order to show how small it is. The FT-991 seems to be the successor of the small-sized FT-897.



AS! AS! QRX5 HI HI

We had very good time in the evening, too.



JA4MRL, JA3AVO, JL1IRB, JE1TRV, JK7UST

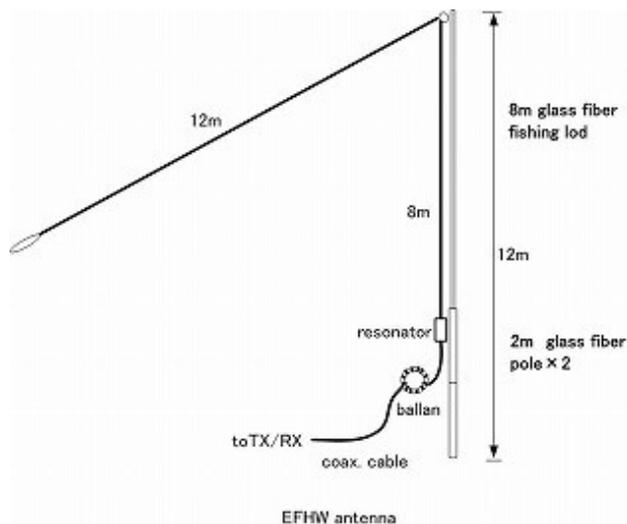
WHAT DID I GET ON THE HAM FAIR 2014, KIYO, JH1KMU #15129

I went to the Ham Fair 2014 last month after six years' absence. I joined FISTS on early 2013 and then I decided to give small support to FISTS booth on the fair this year. So I got Tokyo Big Sight before 9 AM on Saturday 23, August. I met JK7UST Sugi san, JQ1BWT Jun san and many friends and had very happy time at the fair.

I took a walk along numbers of booth and I got one thing for souvenir of Ham Fair. The souvenir was an assembled resonator for Zepp like antenna for 40 m band. It was handmade by JL1CHV Inoue san and the price was 3,500 yen with no electric wire. Some maker and publisher give Zepp like antenna but their price are too high for poor CW man. The price of my souvenir is gentle to my pocket.

Last Sunday, I put the electric wire about 20 m long to the resonator and put it up as shown in the picture. This antenna

is called End-Feeded Half-Wave, EFHW. The antenna gives good V.S.W.R. 1.6 on 7.025 MHz to transceiver and I think that the receiving signals get more strong and powerful feeling the vertical antenna. It has vertical part about 8 m long and horizontal part about 12 m long, so it must be good antenna for both operation to domestic and DX.



**PARTICIPATED IN 6 M AND DOWN CONTEST HOSTED BY JARL,
HIRO, JI2GZC #15148**

July 6, 2014 JST. 06:00 to 12:00 From Mt Sangane (300m), Nishio-city, Aichi JCC2014

At first, I thought that I might not participate in this contest because I did not feel very good. However, as soon as I heard “TEST” on the 2 m CW, I decided to go to the mountain in order to participate in the contest from there. I got prepared in the evening, and put the machine and antenna onto my car at 5:00 AM next morning.

At the mountain, I tied 6 m DP to a bamboo pole. I also set up 2 m and 6 m mobile whip mounted on aluminum bases and fixed them on the roof of my favorite SUBARU car. After a while, I replaced these antennas to a 70 cm whip. My IC-706 worked fine even though it was connected directly to the 12 V battery of my car.

I enjoyed operation until some luxurious foreign sport-cars came to the place I was operating. I could not stop from putting my paddle aside and examining the “super-cars” closely. In addition, they made a lot of noise from their V12-cylinder engines which made me unable to continue CW operation anyway. I decided to talk to the drivers of the cars and it was very enjoyable, indeed.

In conclusion, I very much enjoyed both 6 m and down contest and the “super-cars”.



QSY TO UK, MANABU, JE1RZR #15020

QSY to UK, not United Kingdom but Uzbekistan, one of former soviet union country in central Asia in the mid of July. I will work in Tashkent, capital city of the Republic. It's my second assignment there; after 2000 till 2006's. Maybe 3 or 4 or 5 years this time? I'd like to set up my station there as soon as I can and QRV as UK/JE1RZR, maybe. FISTS guys organized a really nice farewell party in Yokohama. Looking forward to seeing all of you on the air!

A picture was forgotten to add in the last issue. This is the complete version of his article. (Editor)



SPECIAL TOPIC: HOME-MADE/KIT

AMA, JI3SBA #15115

This is my new 20m QRP transceiver. It is the image of autumn leaves.



SUGI, JK7UST #7178

This summer, I made a 40 m receiver kit. It's made by AITEC. I have replaced one of original filters. I used a Murata ceramic filter (CFK455J). Because the original filters are too large to copy CW. It works very well for SSB. But I need more narrow filter for CW, hi. So I'm trying to make a home brew CW receiver.



MY HOME BREWING, AKI, JL1GEL #15147

Home brewing of radios and other necessary equipment is one of the interesting parts of ham radio.

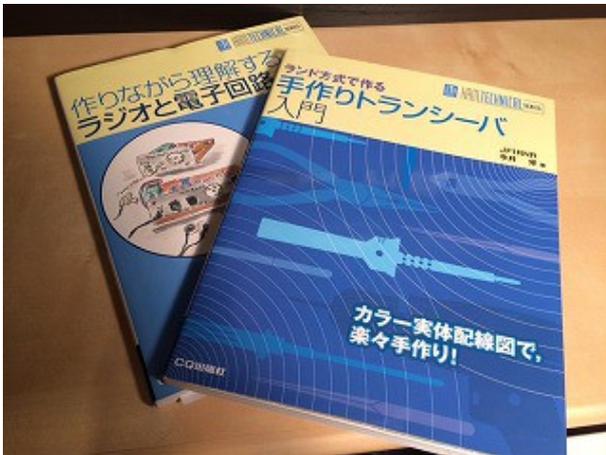
Since I had resumed ham radio couple of years ago, I had made some electronic keyers and other equipment. Of course, I don't have such a technical skill to design those circuits from scratch by myself, so I usually buy kits from kit vendors.



Recently, I have assembled, for the first time ever, a QRP CW transceiver kit for 40 m band, and also have got approval to use the transceiver from the Telecommunications Ministry.



After I have assembled the transceiver, I've become interested in home brewing of transceivers. I bought these guide books for home brewing transceivers some time before, and now I am considering which would be the next candidate.



Unfortunately, some of the popular semiconductor parts frequently used in the books are not manufactured already and being disappearing from the market. In this regard, I sometimes visit AKIHABARA to search and buy such endangered electronic parts. Here are the piles of electronic parts. (Well... pretty enough amount for the rest of my life!)



ELECRAFT K1 SN1742, NAO, JO3HPM #15008

I ordered a K1 from EDC, an Elecraft distributor in Japan, on 10 December 2003. Two days later it was on my doorstep. When I opened a package, I felt how small the K1 was. I had two reasons why I selected the K1. One was I wanted a small rig which enables me to operate HF on the top of mountain. The other was I wanted to learn about an electronic circuit of a transceiver. Because someday in future I would like to operate using all home-made equipment including a transceiver, an antenna, and a key.

Table 1 shows a list of my K1 and options.

	Firmware Revision	Prices of the day (yen)
K1 SN1742	F-4 (Mar. 2003)	57,000
4-Band Filter Module (KFL1-4)	A-1 (Jan. 2001)	Included in above.
Internal Automatic Antenna Tuner (KAT1)	C-1 (Mar. 2003)	16,000
Noise Blanker (KNB1)	C-1 (Jul. 2001)	5,000
Wide Range Tilt Stand (KTS1)	G (Jan. 2001)	6,000

During the assembly, I read an owner's manual carefully and take enough time to solder electronic parts and to wind coils. I never hurried for the goal. It was the great time and I did not want to complete my K1.

After completion of the assembly, I performed signal tracing measurements written in owner's manual Appendix E to verify how I could make my K1 correctly. The result of "Receiver and VFO Signal Tracing" was listed in Table 2. According to the manual, measured values can vary 25% and still be acceptable. In the "Measured" column of the table, black colour font means in the Expected range, magenta means not in the Expected range but still in the 25% variation, and red means over 25% variation.

Next, I performed "Transmitter Signal Tracing" measurements listed in Table 3. The frequency was set to 14 MHz and output power was set to 3 W. As listed in Table 3, the measured values From "TX buffer" to "receive signal shunt" of my K1 were outside of 25% variation levels. But fortunately, the final power was OK.

Table 2				Table 3			
No.	Signal	Expected (V)	Measured (V)	No.	Signal	Expected (V)	Measured (V)
5	VFO:U7 pin1	0.02-0.04	0.05	7	PRE(premix)	0.04-0.09	0.09
6	Prmix crystal:U7 pin7	0.04-0.25	0.27	8	ATTN(TX attenuator)	0.02-0.05	0.02
7	Premixer:U7 pin4or5	0.04-0.25	0.08	9	OSC(TX 4.915MHz)	0.01-0.04	0.03
8	Premix band-pass filter:FIL-P1 pin6	0.04-0.15	0.10	10	MIX(TX mixer)	0.1-0.2	0.08
9	BFO:U2 pin7	0.015-0.100	0.035	11	BUF(TX buffer)	1.5-2.0	0.68
11	Low-pass filter:FIL-P3 pin1	0.12-0.16	0.13	12	TR1(first TX T-R)	0.5-1.0	0.34
12	T-R switch:FIL-P2 pin8	0.07-0.12	0.10	13	BPF(band-pass filter)	0.5-1.0	0.24
13	RF band-pass filter:FIL-P2 pin1	0.06-0.13	0.08	14	TR2(second TX T-R)	0.5-1.0	0.20
14	Attenuator and T1:U1 pin1	0.40-0.70	0.37	15	TR3(receive signal shunt)	<0.01	0.05
15	Receive mixer:U1 pin4	0.50-0.80	0.38	17	DRV(driver)	0.9-1.6	1.0
16	Post-mixer amp:R14 right end	0.50-0.80	0.53	18	PA(power amp)	10-15	12.1
18	Crystal filter:U2 pin1	0.30-0.50	0.54	19	ANT(low-pass filter)	10-12	10.8
21	Product detector:U2 pin4	0.40-0.80	0.44	21	RFD(RF output detector)	1.7-2.0	OK
22	AF preamp:U3 pin5	2-4	3.0				
23	AF amp:U4 pin6	0-5	OK				

Table 4 shows some specifications of my K1. An owner could choose whether to set up the VFO for 80 kHz or 150 kHz coverage. I selected 150 kHz for my K1. Because I could not forget a lot of happy QSOs between 21.100 MHz and 21.150 MHz in my beginner's day. On the other hand, frequency stability against temperature change became a bit worse. There were noisy frequencies in the bands. The noise on 14.055 MHz may bother me to join FEA net held around 14.054 MHz. Receive sensitivity specification written in the manual is 0.15 uV (-16 dBu), so my K1 has enough

sensitivity. During the spurious measurement, the output power was set to 5 W. The specification value of -40 dBc in the manual was satisfied. The RIT range was from -3.5 kHz to +3.9 kHz.

Table 4

Band	Frequency range (MHz)		Noisy frequency (MHz)	Receive sensitivity (dBu)	Output power (W)		Max spurious (dBc@MHz)
	Min	Max			Min	Max	
7	6.9959	7.1758	6.9991, 7.0560, 7.1701	-28 (-135dBm)	0.3	7.8	-52.6@28.13
10	9.9897	10.1696	9.9985, 10.0555, 10.1698	-26	0.3	7.0	-51.7@20.25
14	13.9900	14.1700	13.9980, 14.0550, 14.0940, 14.1694	-28	0.3	7.4	-49.1@28.13
21	20.9877	21.1678	20.9970, 21.0715, 21.1684	-28	0.4	5.5	-51.9@42.20

K1 has a 6-bar-graph S-meter. Fig. 1 shows relation between an input RF signal power and number of S-meter bar displayed. According to the http://en.wikipedia.org/wiki/S_meter, 1 bar indicates about between S1 and S4, 2 or 3 bars indicate about S5, 4 or 5 bars indicate about S6, and 6 bars indicates about S6 over. The figure also shows relation between the input power and a strength of an output AF signal. When AGC OFF, a distortion of AF signal occurred above -86 dBm input power. But when AGC ON, the distortion occurred above -30 dBm RF input.

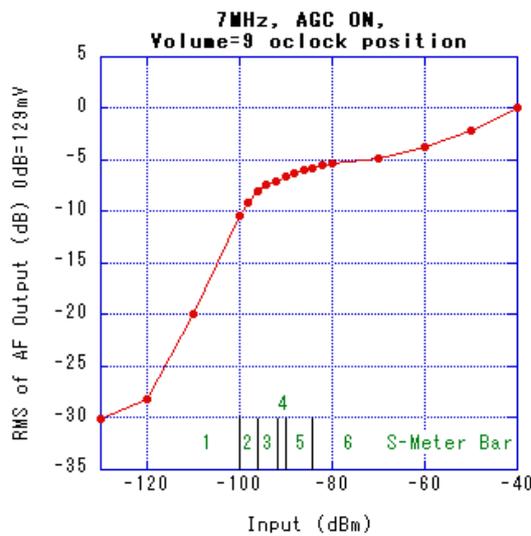


Fig. 1.

Fig. 2 shows an effect of variable crystal filter of my K1. The horizontal axis was an input RF signal frequency and 0 kHz of the axis correspond to 7.020 MHz carrier. The vertical axis was AF output level and selected the maximum voltages as 0 dB. BFO was adjusted to 800 Hz. I would like to confirm this figure shows correct filter shapes.

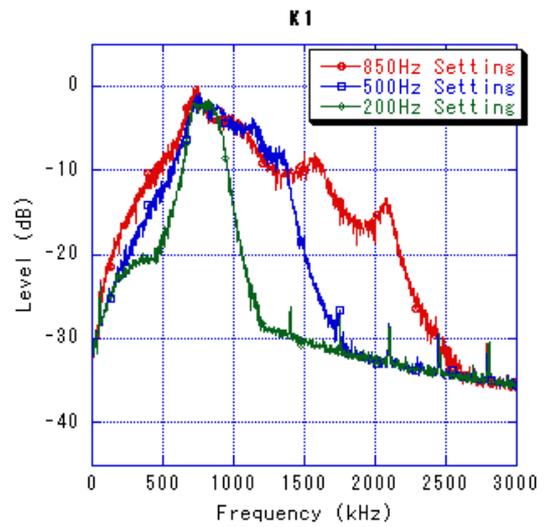


Fig. 2.

Fig. 3 shows an RF output signal generated by an internal keyer circuit of my K1. The rise-time was 4 ms and the fall-time was 0.5 ms. No overshoot was observed. The ratio of dash and dot was 3:1.

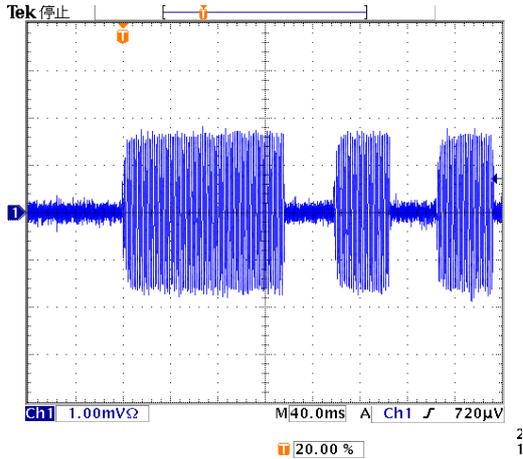


Fig. 3.

A current drain during transmission on 40 m was shown in Fig. 4. The power supply voltage was set to 12 V. The current drain during receiving was only 60 mA.

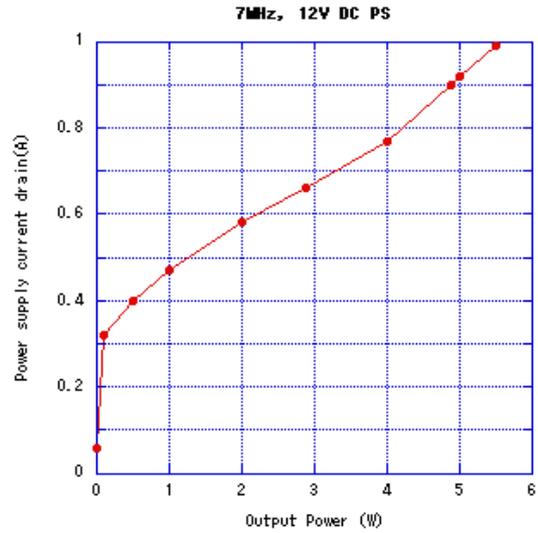


Fig. 4.

An internal automatic antenna tuner option added a function to measure an output power level. Its linearity measured using Agilent E4417A power meter was shown in Fig. 5. The internal power meter displayed 20% below external measurement levels on 21 MHz.

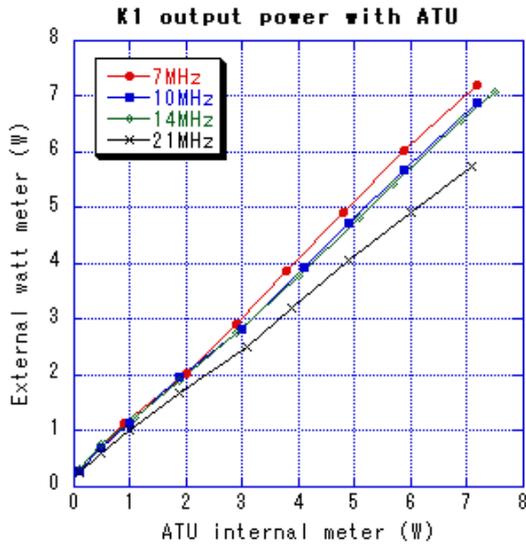


Fig. 5.

Fig. 6 shows a set value linearity of RF output power on 7 MHz.

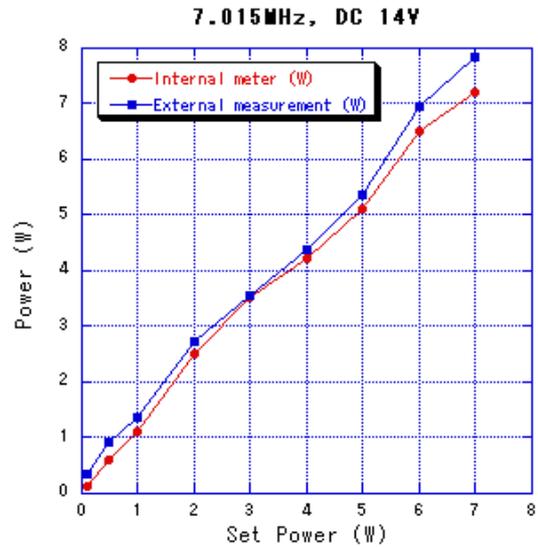


Fig. 6.

Fig. 7 shows a relation between DC power supply voltage and an RF output power on 7 MHz. A warning “BAT LO” is displayed on LCD below 9 V. A voltage displayed on BAT menu of my K1 was 0.3 V lower than the real value.

The first-ever QSO using my K1 was done on 40 m on 20 March 2004. It was with Kazu-san JK1TCV, FISTS #15034, and he also operated his K1 SN1526. Surprisingly, I worked LU5DYV on 20 m in the late afternoon of the day. I believe it was a gift from a goddess of ionosphere to celebrate my K1.

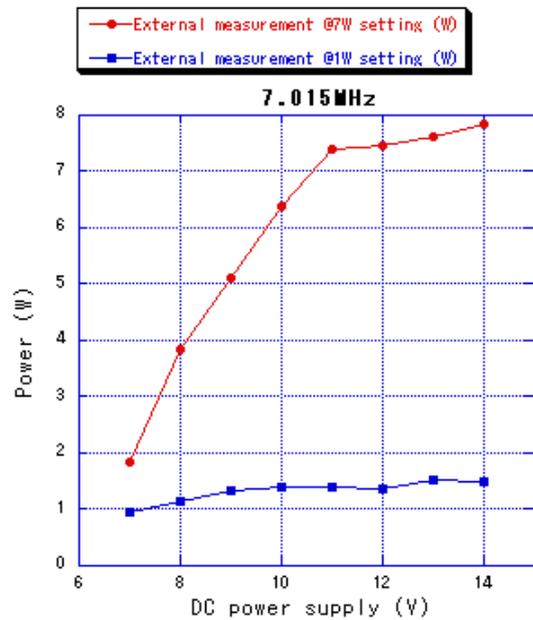
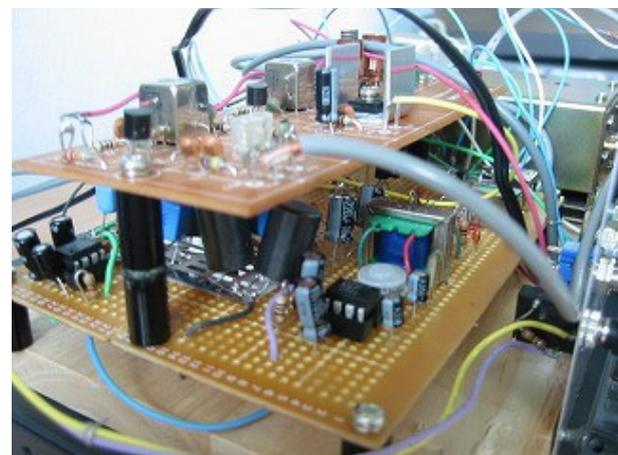
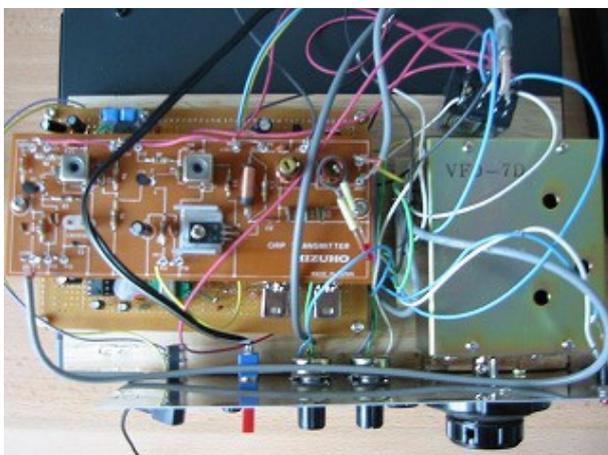


Fig. 7.

MANABU, JE1RZR #15020

This is a QRP TRX for 40-m CW I built ten years ago. TX is QP-7 kit, with 1-W output, provided by MIZUHO, Japanese kit manufacturer. RX is Direct Conversion receiver. I found the design of RX on book written by the president of MIZUHO company. I added the relay and audio peak filter so it works as semi-break-in TRX. It was the first time for me to build up home-made TRX so I was extremely excited when I worked a first QSO by it. I'm sure it must be a most fun for amateur radio to QSO using home-made equipment. I built K2, KX1, K3 kits and of course they are excellent gear but never gave me such a big sensation by this small and simple home-made rig.



FEA CW NET RESULTS: NO. 498 TO 510, NAO, JO3HPM #15008

No.	Date (Y/M/D)	Time (UTC)	Freq. (MHz)	Controller	Participants
510-2	2014/9/28	0800-0818	14.054	JE7YTQ	JL1GEL, ZL1ARW
510-1	2014/9/27	2300-0004	7.0265	JL1GEL	JR7OEF, JK7UST, 7J1ATG/1, JP1BJB, JA4IJJ, JH1KMU, JO3HPM/3, JG1BGT
509-2	2014/9/21	0800-0817	14.054	JL1GEL	JK7UST
509-1	2014/9/20	2300-2341	7.0265	JG0SXC	JO3HPM, JL1GEL, 7J1ATG/1, JA4IJJ, JK7UST
508-2	2014/9/14	0800-0853	14.054	JE7YTQ	ZL1AOH, JL1GEL, JE1TRV, JO3HPM
508-1	2014/9/13	2300-0010	7.026	JL1GEL	JK7UST, JI2GZC, 7J1ATG/1, JA4IJJ, JH1KMU, JO3HPM
507-2	2014/9/7	0800-0833	14.054	JL1GEL	7J1ATG/1
507-1	2014/9/6	2300-0011	7.026	JO3HPM	JS1QIZ, JL1GEL, JI2GZC, JA4MRL, JE1TRV
506-2	2014/8/31	0800-0810	14.054	JE7YTQ	None
506-1	2014/8/30	2300-0009	7.025	JO3HPM	JE1TRV, JS1QIZ, JL1GEL, JK7UST, JA4IJJ, JP1BJB/M, JI2GZC, JF3KNW
505-2	2014/8/24	0800-0850	14.054	JL1GEL	VK4BGR
505-1	2014/8/23	2300-0005	7.029	JO3HPM	JL1GEL, JS1QIZ, JA4IJJ, JH1KMU
504-2	2014/8/17	0800-0844	14.0535	JE7YTQ	JO3HPM, VK4BGR
504-1	2014/8/16	2300-2357	7.029	JO3HPM	JF3KNW, JS1QIZ, JL1GEL, JP1BJB
503-2	2014/8/10	0800-0830	14.056	JL1GEL	JO3HPM, JK7UST, JA7TJ, JA4MRL
503-1	2014/8/9	2300-2347	7.026	JL1GEL	JE1TRV, JH1KMU, JK7UST
502-2	2014/8/3	0800-0837	14.054	JE7YTQ	JO3HPM
502-1	2014/8/2	2300-2351	7.0258	JO3HPM	JS1QIZ, JH1KMU, JK7UST, JP1BJB/M, JG0SXC, JL1GEL
501-2	2014/7/27	0800-0818	14.054	JL1GEL	JK7UST
501-1	2014/7/26	2300-2358	7.026	JO3HPM	JS1QIZ, JR7OEF, JA4MRL, JL1GEL
500-2	2014/7/20	0800-0816	14.055	JE7YTQ	JL1GEL, JO3HPM
500-1	2014/7/19	2300-0006	7.026	JO3HPM	JS1QIZ, JK7UST, JP1BJB/M, JA4IJJ, 7J1ATG/1, JL1GEL, JA4MRL, JF3KNW
499-2	2014/7/13	0800-0845	14.0545	JL1GEL	JO3HPM, JK7UST, JA4MRL, 7J1ATG/1
499-1	2014/7/12	2300-0006	7.026	JO3HPM	JS1QIZ, JA4IJJ, JI2GZC, JH1KMU, JE1RZR, JL1GEL, JK7UST, JA4MRL, JI3UVB
498-2	2014/7/6	0800-0843	14.054	JE7YTQ	ZL1AOH, VK4TJ, JL1GEL, JO3HPM, JE1RZR
498-1	2014/7/5	2300-0003	7.026	JO3HPM	JE1TRV, JS1QIZ, JL1GEL, JE1RZR, JA4IJJ, JP1BJB, JK7UST, 7J1ATG/1

FINALE

My wife has been in trouble with feeding damage by Japanese deer. They ate all my wife's plants, such as roses, tulips, violets, tomatoes, and so on. They have no natural enemies, because Japanese wolf became extinct about 100 years ago. Wolf reintroduction may be one of the solutions. But it is difficult to do right now. Do you know any effective measures? I wish to thank Kiyo, JH1KMU and Tak, JS1QIZ for helping to edit this issue. 73/88 and stay sober de Nao.