A Blog Article by

Geek Must Have

Instruction for My Gear

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Preamble paragraph goes here

1. Introduction

There is so much gear that I use that I often forget how to use it and or can't find the instructions. This feeble attempt is to put instructions for just the gear I use in one place.

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2. ANYSECU SF-401 Plus

Figure 1. Surecomm ANYSECY SF-401 Plus

The manual can be viewed at this link::./documents/SureCom_Anysecu_SF-401Plus_FrequencyCounter_210314.pdf[Link]

This is a frequency counter and [CTCSS] meter. Used to determine the frequency and [CTCSS] code of a nearby transmitting device.

[CTCSS] tones range from 67 to 257 Hz. The tones are usually referred to as sub-audible tones. These tones allow a single frequency to be shared by multiple groups without them hearing the other groups conversations. The two groups can still interfere with each other without knowing it.

NS [1]	PL	Hz	Notes
1	XZ	67.0	
39	WZ	69.3	[2]
2	XA	71.9	
3	WA	74.4	
4	XB	77.0	
5	WB	79.7	[3]
6	YZ	82.5	
7	YA	85.4	
8	YB	88.5	
9	ZZ	91.5	
10	ZA	94.8	
11	ZB	97.4	[4]
12	1Z	100.0	
13	1A	103.5	
14	1B	107.2	
15	2Z	110.9	
16	2A	114.8	
17	2B	118.8	

NS [1]	PL	Hz	Notes
18	3Z	123.0	
19	3A	127.3	
20	3B	131.8	
21	4Z	136.5	
22	4A	141.3	
23	4B	146.2	
NATO		150.0	[5][7]
24	5Z	151.4	
25	5A	156.7	
40		159.8	[7]
26	5B	162.2	
41		165.5	[7]
27	6Z	167.9	
42		171.3	[7]
28	6A	173.8	
43		177.3	[7]
29	6B	179.9	
44		183.5	[7]

NS [1]	PL	Hz	Notes
30	7Z	186.2	
45		189.9	[7]
31	7A	192.8	
46		196.6	[7]
47		199.5	[7]
32	M1	203.5	
48	8Z	206.5	[6][7]
33	M2	210.7	
34	M3	218.1	
35	M4	225.7	
49	9Z	229.1	[6][7]
36	M5	233.6	
37	M6	241.8	
38	M7	250.3	
50	0Z	254.1	[6][7]

Figure 2. Tone and Channel chart

2.1. Turn unit on

Press and hold the Black button on the left most side. When you see the `Power on` message, release the button

There are two modes `Analog` and `Digital`, use the F3 button `Middle white button` to change.

Meter will turn off after a few minutes of inactivity, this is normal.

Manually turn it off, press `Menu` black button, then 2nd or 3rd white button to get to `Power off` option, hold the black button down while the count down time reaches zero, release the black button.

2.2. What is switch on top

The switch on the top is **Not** the power switch, it is the signal attenuation switch, left is 0dB, right is 10dB

Figure 3. Attenuation switch

2.3. Operation

Turn the unit on and get close to transmitter within a few feet, turn meter to face the transmitter.

If the transmitters has a PL tone then the actual frequency may up to 600 mHZ different in either +/- direction. An example a transmitter at 440.600 mHZ may show up on meter a 440.000 mHZ.

Figure 4. F2 Amalog/Digit

3. References

CTCSS

In telecommunications, Continuous Tone-Coded Squelch System or CTCSS is one type of circuit that is used to reduce the annoyance of listening to other users on a shared two-way radio communications channel. (See squelch.) It is sometimes referred to as tone squelch. It does this by adding a low frequency audio tone to the voice. Where more than one group of users is on the same radio frequency (called co-channel users), CTCSS circuitry mutes those users who are using a different CTCSS tone or no CTCSS. It is sometimes referred to as a sub-channel, but this is a misnomer because no additional channels are created. All users with different CTCSS tones on the same channel are still transmitting on the identical radio frequency, and their transmissions interfere with each other; however; the interference is masked under most (but not all) conditions. The CTCSS feature also does not offer any security.

4. Document History

Table 1. Document History

Date	Version	Author	Description
03/14/2021	V2.1b	JHRS	Initial version