CM-choke kan minske støjen betydeligt på HF ved modtagelse.

Så blev der fundet kilder på, at CM-choken kan minske støjen betydeligt på HF ved modtagelse (som vi talte om 10-8):

Common-Mode Chokes by Chuck Counselman, W1HIS:
https://web.archive.org/web/20170302010541/http://www.yccc.org/Articles/W1HIS/CommonModeChokesW1HIS2006Apr06.pdf
Citat: "…
Your ability to hear weak MF and HF signals is limited by noise, generated mostly by solid-state electronic switches within your own house, conducted via the 60-Hz power line to your shack, and from there to your antenna by common-mode current on the feedline. **Putting common-mode chokes on your feedline, power, and other cables will substantially reduce your received noise level.** A good choke has >> 1 kΩ impedance for all MF and HF bands and costs $12 (for a small cable) to $120 (for a large, QRO cable)
...
One of life's most economical ways to increase receiving performance."
— K1VR
...
(3) to keep the RF noise that all the electronic devices in your house generate, from being conducted via 60-Hz power, telephone and other cables to the outer shield of your radio, and from there along your feedline(s) to your antenna(s), in common-mode.
...
Reason (3) matters only to a serious DXer or contester, but it is one of the most economical of all ways of improving receiving performance.
...
f your antenna is highly directional, as a Yagi or a Beverage is, then you have another reason to use a common-mode choke: to prevent reception of QRM and QRN by your feedline as opposed to your antenna. Without a good common-mode choke in the feedline at its feedpoint, your potentially excellent antenna's 25- or 30-dB front-to-back or front-to-side ratio could be reduced to 15 or even 10 dB.
In the HF hamshacks that I've visited, the background noise level heard on most HF bands (especially the low bands) could be reduced by more than an S-unit by means of common-mode choking. In some cases (which I could name but won't, to avoid embarrassing my friends) I was able to reduce the received noise level by four or five S-units. I reduced my own received noise level on the low bands by even more.
…"

End-fed vs. dipole: effects of common-mode currents on reception:
https://www.youtube.com/watch?v=rZifzAY2lUk

G3TXQ, High performance common-mode chokes.
https://web.archive.org/web/20190717170322/https://gm3sek.files.wordpress.com/2019/01/G3TXQ-RC.pdf

Fx:
17 vdg FT240-31
+
11 vdg FT240-52
+
8 vdg FT240-61
G3TXQ er også god at læse:
http://www.karinya.net/g3txq/chokes/
https://web.archive.org/web/20190208231402/http://karinya.net/g3txq/chokes/
http://karinya.net/g3txq/baluns/baluns.pdf
https://web.archive.org/web/20190211134715/http://karinya.net/g3txq/baluns/baluns.pdf
https://web.archive.org/web/20161216100405/http://www.karinya.net/g3txq/baluns/basic/basic_baluns.pdf
http://www.karinya.net/g3txq/baluns/basic/basic_baluns.pdf
https://web.archive.org/web/20180702045800/http://www.karinya.net/g3txq/unun/

An 'In Practice' Special
Cost-effective ferrite chokes and baluns
by Ian White, GM3SEK
https://web.archive.org/web/20150116193623/http://www.nonstopsystems.com/radio/pdf-ant/article-cost-effective-chokes.pdf

-

Bonus:

A Ham's Guide to RFI, Ferrites, Baluns, and Audio Interfacing
Revision 7 Jan 2019
by Jim Brown K9YC
https://web.archive.org/web/20220614093229/http://www.audiosystemsgroup.com/RFI-Ham.pdf
http://audiosystemsgroup.com/RFI-Ham.pdf
Citat: "...
The basis of this tutorial is a combination of my engineering education, 60 years in ham radio, my work as vice-chair of the AES Standards Committee working group on EMC, and extensive research on RFI in the pro audio world where I made my living.

...
The Pin 1 Problem:
...
Summary RF is coupled into equipment on wiring that acts as receiving antennas – loudspeaker wiring, telephone wiring, audio interconnect wiring, antenna wiring, even wiring inside equipment that is poorly shielded. The pin 1 problem is a widespread design defect in computer gear, audio and video equipment, and even ham gear, and is a major cause of RFI. Imperfect construction of cables also converts RF to a differential mode signal. Once "inside the box," RF is detected by semiconductor junctions, and added to the signal where it is heard as interference. Most antenna action outside the box can be suppressed by suitable ferrite chokes that block the current.
...
Thus we state three general rules about the use of ferrites as chokes. 1) More impedance is better. 2) All ferrite chokes should be designed to operate in the frequency range where their series equivalent resistance is large and their series equivalent reactance is small. 3) These conditions are satisfied at or near the choke's resonant frequency. We do this by selecting a suitable material, core size, and number of turns. These rules apply to both single turn and multi-turn chokes, and they apply to chokes (but not transformers) used for transmitting as well.
...
Threshold effect is the reason why adding a few clamp-on beads doesn't make a dent in RFI at HF— you need turns to hit the threshold!
...
Most common mode noise on 120/240V power wiring is caused by a Pin One-like problem with the green wire where it connects to equipment. It SHOULD go straight to the shielding enclosure, not to the circuit board. Often it does not.
...
Commercial AC power line filters (Fig 29) are generally a waste of money, because they provide only differential mode filtering. Common mode current, nearly all of which is on the ground conductor (the green wire), goes right past the filter – it goes to the filter chassis at input and output.
The filters of Fig 29b have a built-in standard IEC power connector, and it is primarily the bonding of the green wire to the chassis (by mounting the filters to the chassis) that solves RFI problems, not the components inside the filter!
...
Advantages of Current Baluns (Common Mode Chokes) Maxwell seems to have been the first to realize that with a common mode choke, loss in the ferrite is not a bad thing if you have enough of it! (We'll discuss this in detail a little later). Maxwell, and Roy Lewallen (W7EL) showed that a current balun has some important advantages over a voltage balun, and that the advantages are so great that only current baluns should be used in most ham radio applications. [Maxwell,"Some Aspects of the Balun Problem," QST March 1983,] [Roy Lewallen, W7EL, "Baluns: What They Do and How They Do It," http://www.eznec.com/Amateur/Articles/Baluns.pdf ,The ARRL Antenna Compendium Vol 1] Let's look at those advantages.
* Because the core sees only the common mode flux, a much smaller ferrite core is needed to handle high power without saturation.
* If the common mode impedance is high enough, common mode current can be forced to near zero, which in turn forces near ideal balance.

...
Disadvantages of "String of Bead" Baluns (Common Mode Chokes) The common mode (choking) impedance is the impedance of one bead multiplied by the number of beads. As a result,
...
Disadvantages of Voltage (Transformer) Baluns The ferrite core of a transformer balun (the Ruthroff "voltage balun") sees all of the transmitted power, so it is easily overheated and saturated by high power.
...
Lossy Toroidal Coaxial Chokes Winding multiple turns of a coaxial feedline through one or more lossy toroidal cores is simply another (and usually better) way to construct a W2DU balun.
...
Noise Coupling The choking impedance should be high enough that any noise current that may be received on the feedline behaving as an antenna cannot flow onto the intentional antenna.
...
ABOUT THE AUTHOR
Jim Brown got interested in music and radio as a teenager, falling in love with jazz and Bach, and qualifying for his Novice license (WN8FNI) before his 14th birthday. Three years later he obtained Amateur Extra Class and First Class Radiotelephone licenses, and entered the Electrical Engineering program at the University of Cincinnati. He received the BSEE in 1964 and has worked in broadcasting and professional audio since 1960. Since 1985, his consulting practice has specialized in the design of sound systems for worship, performance, and sports facilities. More recently, his focus has expanded to include research and consulting on EMC.
Jim is a Fellow of the Audio Engineering Society (AES), and an emeritus member of the Acoustical Society of America, the Society of Broadcast Engineers, and the Society of Motion Picture and Television Engineers. He has presented invited papers and workshops to all of those societies, and to the IEEE EMC Symposium. He is a member of the AES Technical Committee on Acoustics and Sound Reinforcement, and the AES Standards Committee's Working Groups on Microphones, Intelligibility, Acoustic and Sound Source Modeling, Digital Audio Transmission, and Audio Interconnection. He is Vice-Chair of the AES Standards Committee Working Group on EMC. After 42 years in Chicago, he relocated in 2006 to Santa Cruz, where he is active on the ham bands as K9YC, and is an active member of the Northern California Contest Club.
..."

I det hele taget så er der masser af godt stof på hans publikations side
K9YC's publikationer
http://audiosystemsgroup.com/publish.htm
https://web.archive.org/web/20220614093222/http://www.audiosystemsgroup.com/publish.htm
Hej fra Kurt de OZ7OU
..."

Mvh

OZ1HFT / Glenn