FIVE AND NINE PLUS

THE OFFICIAL NEWSLETTER OF THE APPLEDORE AND DISTRICT AMATEUR RADIO CLUB

Club Callsigns: G2FKO and GX2KKO
Website: www.adarc.co.uk

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EDITORIAL

Apologies for the delayed September meeting this was due to the 3rd Monday in the month clashing with Dave's holiday and so we were unable to open the venue up. Delaying the meeting by one week meant that Mark G6BNB will also be unavailable. The practical antenna evening has now moved to the February 2026 meeting. For the January 2026 meeting, which previously was free, I have managed to secure the services of Martin M1MRB to present an on-line talk. Martin is the lead presenter on the ICQ Podcast and previously gave us a talk back in 2021. Martin's talk will be entitled 'Basic Faultfinding.

The September 2025 talk will now be a combined natter night and members 'Show and Tell'. I would encourage any members with projects on their workbench or an interesting piece of shack software they use to come along and show all.

August's meeting was a very interesting talk given by new member Mark G6BNB illustrating Mark's early days working for a film and video special effects company, Smoke & Mirrors. The talk was certainly well received; I have included a small report of the proceedings in this newsletter.

Terry G4CHD has once again been busy and has produced a video detailing his continued development of his compact 20m delta antenna. Hopefully by the time you receive this newsletter the video will be available for viewing on YouTube. https://youtu.be/oJpWWaKU5jU It is well worth a watch.

73 Mike (G4KXQ)

DATES FOR THE DIARY

The weekend of 27th and 28th September will be 'Railways on The Air' where we intend to operate at the Bideford Heritage Railway at the old Bideford Railway Station, East the Water. Any members intending to support the station over the weekend need to be aware that the 'Hotel Residents Only' parking restrictions in the station carpark are being enforced with CCTV cameras. We suggest you park in the Brunswick Wharf public carpark for the day,

Club Program

Sept 21st 2025	Weston Super Mare Radio Rally	
Sept 22nd 2025	Natter Night with Show and Tell	
Please note change in meeting date		
Sept 27th - 28th	Railways On The Air Weekend – Bideford Railway Station	
Oct 12th 2025	Autumn Dartmoor Radio Club Rally - Yelverton	
Oct 20th 2025	On-Line Talk - Guide to using satellites in amateur radio	Tim GW4VXE
Nov 17th 2025	Bring & Buy	
Dec 7th 2025	Mid Devon Amateur Radio & Electronics Fair 2025 - Winkleigh	
Dec 15th 2025	Christmas Party	
Jan 19th 2026	External Speaker - Basic Fault Finding	Martin Butler M1MRB
Feb 16th 2026	Antenna Build - Practical	Mike G4KXQ, Mark G6BNB
March 16th 2026	Annual General Meeting	

LOCAL NETS

2m Elevenses FM Net: Mon/Wed/Fri :
11 - 12.00 noon via GB3DN Net Control ; Mike (G3PGA)

Friday Night 2m Net: Friday : 145.450 FM, 8 -9pm

Sunday Top Band Net: Sunday 1.860 MHz
9.30 - 10.15am
(LSB - 32W pep max)

2m SSB Nets: Wed: 8 - 9pm 144.260MHz USB SSB (Vertical polarised)
Sun: approx 10.30am (follows Top Band Net) 144.260MHz USB SSB (Vertical polarised)

Sunday FM Net: Sunday: 11 to noon via GB3DN
Net Control : Chris (G0FJY)

Note :- FM Nets which use GB3DN as shown above will continue despite the recent changes. GB3DN is disconnected from the Wires-X/ Southern Fusion Room just before the listed start and end of each FM Net

State of the Nation. North Devon Repeater Group Rob GØHFN

During a recent QSO on one of the groups repeaters, the discussion eventually turned to the repeater itself. The assumption was that amateur repeaters were a service provided by the RSGB. To be fair, both were relatively new to the hobby and as we all know, there are more important things to learn but the funding of repeaters isn't one of them.

However, as a cover story it is pretty believable. If the credit card statement for GB3DN's Yaesu DR-2XE is ever found. "All good, the RSGB paid for it…." may be a safe, if not honest response. (In the case of the DR-2XE, to avoid depleting the groups emergency fund we split the cost between us. It's a balancing act.)

The group has seeded repeater equipment to Bude, (GB3BU) Bideford (GB7FB) and Holsworthy Beacon (GB3NX and GB3ND) but without the support of Drew MØMFS and Nigel M7FPH who pay for the electricity out of their own pocket, it just wouldn't be viable.

We would also like to thank Mark G6BNB for his help with GB3XM Exmoor and if it were not for issues with GB3DN, Exmoor would be up and running by now.

As many of you know, GB3DN lives on a commercial site and our access is limited. So what we've been doing is muddling along by improving what can be improved while at the same time, avoiding the inevitable. That being, the aerial and feeder.

We've been afraid to ask how much it would cost to engage commercial aerial contractors to replace GB3DN's aerial system because if you cant afford it, you don't ask.

We would like to thank Mike G3PGA who recently stepped down as our rally fund raiser. We know his help has been invaluable, without it we would have had near zero income. How do we know this? Well, we now DO have zero income….

The future of GB3DN is our priority. We do have enough funds to keep it running it the short term but to secure her future and what happens to it ultimately depends on you.

We have set up a Paypal account to accept donations, and, as a small thank you the calls of those that donate will be listed as subscribers in our publicity and social media. Subscribers will also receive a free supporter car sticker. Clickable donation links will also be available on GB3DN's QRZ page.

Donation for North Devon Repeater Group

https://www.paypal.com/ncp/payment/EEE5XZGMMMEE4

Once again, thank you

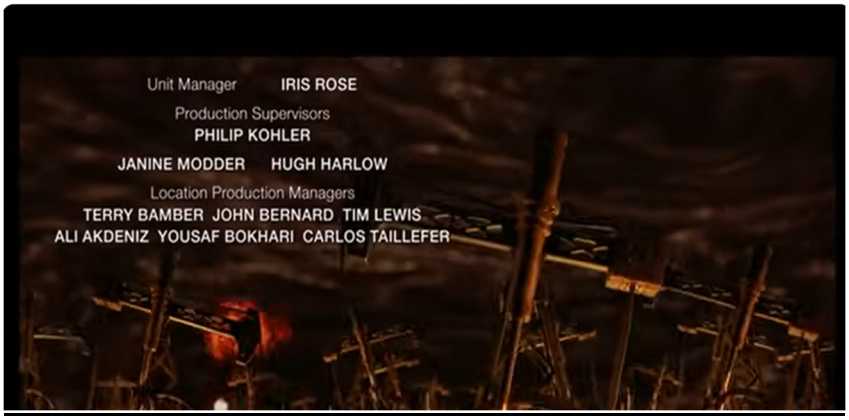
73 de Rob GØHFN

Report of August Meeting A brief history of Film and Video Special Effects Presented By Mark Wildig G6BNB-

Mark's presentation was a swift run though of the history of film making and the various formats used in analogue film making along with aspect ratios and digital colour depth.
Mark then spoke about the early days of special effects starting with a foot tapping introduction from Dire Straits 'Money for Nothing' and Ah Ha's 'Take on Me. These two videos were early examples of a video technique called rotoscoping.

The effects were created by an early Video Graphics Processor called a Bosch FGS-4000 along with Quantel Paintbox and a Sony 1 Inch Analog VTR. Other notable productions Marks's company was involved with included the Liquid Morphing scene in Terminator 2

Smoke and Mirrors was formed in 1995 with 4 people and expanded to have offices in London, New York Shanghi, Cheni(India) and San Paulo. Mark was involved in many memorable productions including a Smirnoff Ice advert with an amazing piano playing talking hound-dog. The Karma Police Video for Radio Head. Mark showed videos how these were presented. Not everything in the film special effects is video processing, Mark showed a prop from the opening introductory frame from the James Bond film 'The World is not Enough'



The sequence featured 'nodding donkey pump' oil well. The effect was generated using a scale model that was gifted to Mark at the end of the production. Mark kindly brought along the model for the evening

The evening was very well received and thank-you to Mark for the hard work in putting the talk together.

Contest Calendar

Lots of contests this month as we move into the winter . The highlights are CQ Worldwide DX Contest, RTTY for the digital mode purists

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Contest Name	Time & Date (UTC)
September 15 - 21	
Scandinavian Activity Contest, CW	1200Z, 20 Sept to 1200Z, 21 Sept
QRP Afield	1500Z-2100Z, 20 Sept
Feld Hell Sprint	1800Z-1959Z, 20 Sept
BARTG Sprint PSK63 Contest	1700Z-2059Z, 21 Sept
September 22 - 28	
UKEICC 80m Contest	2000Z-2100Z, 24 Sept
RSGB 80m Autumn Series, Data	1900Z-2030Z, 25 Sept
CQ Worldwide DX Contest, RTTY	0000Z, 27 Sept to 2400Z, 28 Sept
YU DX Contest	1200Z, 27 Sept to 1159Z, 28 Sept
September 29 - October 5	
URC DX RTTY Contest	0000Z to 2400Z, 03 Oct
German Telegraphy Contest	0700Z-1000Z, 03 Oct
TRC DX Contest	0600Z, 04 Oct to 1800Z, 05 Oct
Oceania DX Contest, Phone	0600Z, 04 Oct to 0600Z, 05 Oct
Worked All Provinces of China DX Contest	0600Z, 04 Oct to 0559Z, 05 Oct
Russian WW Digital Contest	1200Z, 04 Oct to 1159Z, 05 Oct
IARU Region 1 UHF/Microwaves Contest	1400Z, 04 Oct to 1400Z, 05 Oct
International HELL-Contest	1600Z-1800Z, 04 Oct (80m) and 0900Z-1100Z, 05 Oct (40m)
IARU Region 2 Area G HF SSB Contest	2200Z-2359Z, 04 Oct
UBA ON Contest, SSB	0600Z-1000Z, 05 Oct
October 6 - 12	
RSGB 80m Autumn Series, CW	1900Z-2030Z, 06 Oct
10-10 Int. 10-10 Day Sprint	0001Z-2359Z, 10 Oct
Makrothen RTTY Contest	0000Z-0800Z, 11 Oct and 1600Z-2400Z, 11 Oct and 0800Z-1600Z, 12 Oct
Oceania DX Contest, CW	0600Z, 11 Oct to 0600Z, 12 Oct
SKCC Weekend Sprintathon	1200Z, 11 Oct to 2400Z, 12 Oct
Scandinavian Activity Contest, SSB	1200Z, 11 Oct to 1200Z, 12 Oct
UBA ON Contest, CW	0600Z-1000Z, 12 Oct

Data Thanks to WA7BNM Contest Calendar

DX NEWS

Entity/Callsign	Dates	QSL Via	Info
Bermuda (VP9)	27/08/2025 – 14/09/2025	G4OSY	By G4OSY as VP9.G4OSY; @VP9GE; 160-6m; SSB CW
Laos (XW4YY)	29/08/2025 – 11/09/2025	LoTW	By OH7O fm OK18ff; 40 20 17 15 12 10m; SSB FT8; QSL via M0OXO
Tanzania (5H3DX)	31/08/2025 – 21/09/2025	LoTW	By NK8O; mainly CW, some FT8 FT4; 100w, 5w; spare time operation
Rwanda (9X2AW)	01/09/2025 – 27/09/2025	LoTW	By DF2WO fm Kigali; 160-6m, incl 60m; CW FT4 SSB; QSL via M0OXO OQRS
Palau (T88DF)	02/09/2025 – 11/09/2025	LoTW	By JH2DFJ fm Koror I (IOTA OC-009); 160-6m; CW SSB RTTY FT8 FT4 MSK; QSL via Club Log OQRS
Greenland (OX3LX)	04/09/2025 – 16/09/2025	LoTW	By OZ1DJJ fm Nuuk; HF + 6 4m; QSL via OZ0J via Club Log; spare time operation
Montserrat (VP2MAA)	11/09/2025 – 17/09/2025	IK2DUW	By J88BTI; HF; spare time operation
Crete (SV9/EI4L)	11/09/2025 – 18/09/2025	EI4L	By EI4L fm Agios Nickolaos; 20-10m; mainly SSB; 50w
Guam (KH2)	11/09/2025 – 26/09/2025	LoTW	By WE9G as WE9G/KH2; 160-6m; QSL via Club Log OQRS
Annobon I (3C0W)	12/09/2025 – 22/09/2025	LoTW	By YL2GM EA5EL fm IOTA AF-039; 160-6m; CW SSB; QSL via Club Log OQRS
Dodecanese (SV5/HB9OAU)	13/09/2025 – 25/09/2025	LoTW	By HB9OAU fm Karpathos I (IOTA EU-001); 40-6m; SSB CW; holiday style operation
Norfolk I (VK9NT)	14/09/2025 – 27/09/2025	LoTW	By VK3QB VK3HJ VK6CQ; 40-6m; CW FT8, some SSB; QSL via M0OXO
Aland Is (OH0)	15/09/2025 – 26/09/2025	LoTW	By DL2AQI as OH0/DL2AQI and DL4APJ as OH0/DL4APJ; 80-10m; CW SSB + digital
St Pierre & Miquelon (FP5KE)	15/09/2025 – 26/09/2025	LoTW	By 16 op team fm Ile aux Marins (IOTA NA-032); HF; CW SSB RTTY
Curacao (PJ2)	16/09/2025 – 26/09/2025	HA3JB OQRS	By HA3JB as PJ2/HA3JB IOTA SA-099; 80-6m; CW SSB FT8
St Kitts & Nevis (V4)	16/09/2025 – 28/09/2025	LoTW	By K0YA as V4/K0YA and W5RCX as V4/W5RCX; @V47JA; 160-10m; CW SSB FT8
Palau (T88DK)	18/09/2025 – 22/09/2025	LoTW	By JH2DLF as T88DK fm Koror I (IOTA OC-009)
Reunion (FR/F1TEQ)	20/09/2025 – 28/09/2025	F1TEQ	By F1TEQ; 20 15m; SSB FT8
Kyrgyzstan (EX)	21/09/2025 – 29/09/2025	LoTW	By RX3AQU as EX/RX3AQU fm Naryn (MN91aj); 160-6m; CW SSB FT8
Falkland Is (VP8)	22/09/2025 – 01/10/2025	LoTW	By GM4TIF as VP8GMH fm East Falkland I (IOTA SA-002); HF; CW SSB FT8; holiday style operation
Uganda (5X2I)	29/09/2025 – 10/10/2025	HA5AO	By HA5AO; 80-6m; CW SSB FT8
Christmas I (VK9QO)	03/10/2025 – 07/10/2025	LoTW	By JA3GEP JA1COU BA7LVG BH6BEZ; 80-6m; CW SSB FT4 FT8
Bhutan (A52G)	03/10/2025 – 09/10/2025	LoTW	By JA1EOD JI1CPN JH1NRT JH1RFM JH1LBR JG1OAE JM1LPN JH1EKT JR1GJI JE1CQU JG1TVK; 160-6m; CW SSB FT4 FT8
Guatemala (TG9BBV)	05/10/2025 – 10/10/2025	LoTW	By VE7BV; 40-6m; CW SSB, perhaps FT8; QSL via VE7BV
Svalbard (JW)	08/10/2025 – 13/10/2025	Home Call	By LA7XK as JW7XK, LA6VM as JW6VM, LA9DL as JW9DL; HF; CW SSB + digital; QRV for Scandinavian Activity SSB Contest using JW5X
Fernando de Noronha (PY0F)	08/10/2025 – 15/10/2025	W9AP	By N7QT WA7CPA N7JP KC7EFP N9ADG KN2P; 160-10m; QSL via M0URX

Angola (D2A)	17/10/2025 – 28/10/2025	EA7FTR	By EC7R CT7BOL D2ACE EC1T EA1ACP D2XX CT2GFW CT7APE CT1FFU EA5EL; 160-6m; CW SSB RTTY FT8
Saba & St Eustatius (PJ6Y)	17/10/2025 – 29/10/2025	LoTW	By K4KID K9CT DL1MGB G4PVM JA7GYP JA7QJR; HF; QSL via K9CT, LoTW.

Data courtesy of Ng3K.com DX Operations : 2025

LOCAL REPEATERS/GATEWAYS

Frequencies are those transmitted and received by the Repeater

GB3ND UHF DMR Repeater - Holsworthy Beacon TX 439.7375 RX 430.7375 Colour code 1
Slot 1 local RF, Slot 2 SW Cluster Keeper G1BHM

GB3DN VHF FM/C4FM Repeater - Stibb Cross
Tone 77Hz (for analogue FM) TX 145.6375 RX 145.0375, Default Digital Connection : Wires-X Southern Fusion http://www.g0rql.co.uk/gb3dn.htm. Keeper Tony G1BHM

GB7FB UHF DMR Repeater - Bideford TX 439.475 RX 430.4750 Colour code 5 Slot 1 Local RF/DoD Slot 2 SW Cluster . Keeper Drew M0MFS

GB3LZ VHF FM/C4FM Repeater - Winkleigh
Tone 77Hz (for analogue FM) TX 145.6625 RX 145.0625, Digital Connection :
Wires-X SOUTHERN ENGLAND. Keeper Simon G4MQQ

GB7LZ UHF DMR Repeater - Winkleigh
TX 430.9125 RX 438.5125 Colour code 1, Slot 1 Talkgroup 9 local and direct dial, Slot 2 South West Cluster. Keeper G4MQQ

MB6DT VHF Fusion Gateway - Barnstaple
Frequency 144.8125 MHz. Gateway. Keeper Darren (2E0LVC)

GB7TG - UHF DMR Repeater - Wembworthy
TX 430.9750 RX 438.5750 Colour Code 7, Default Connection : Slot 1 Local/DoD Slot 2 SW Cluster Keeper G7SOJ

GB3NX VHF FM Allstar Holsworthy Beacon TX 145.7375 RX 144.1375. CTCSS tone 77hz Connection SW AllStar network (SWAN). Wires-X default room: Southern-Fusion, Keeper G1BHM

GB3BU - UHF DMR Repeater - Bude
TX 430.9625 RX 438.5625 Colour Code 1
Default Connection: Slot 1 Local/DoD Slot 2 SW Cluster Keeper G1BHM

GB3JH – UHF Analogue Repeater – Tiverton
TX 430.8625 RX 438.4625, Tone 77Hz – Keeper G6ASK

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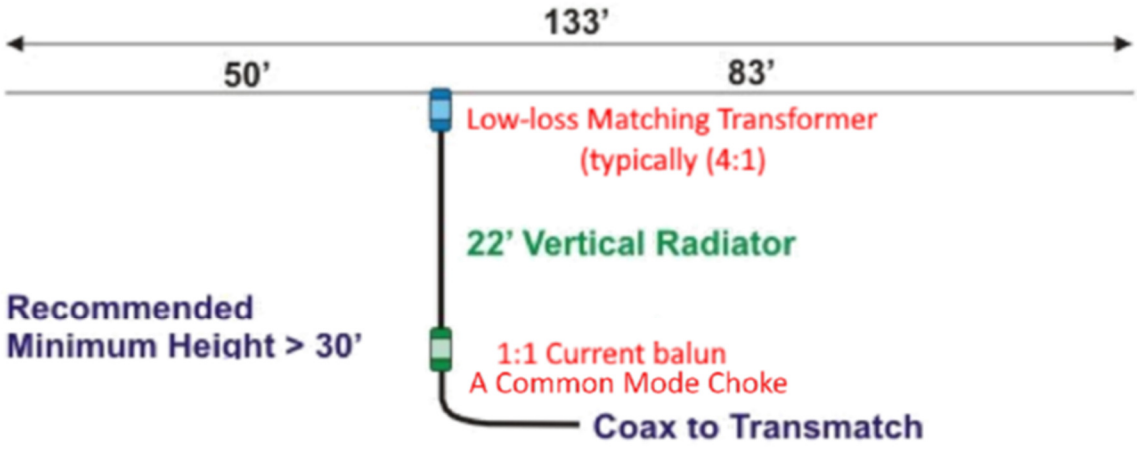
Lets look first at the OCF Antenna

An HF OCF (High Frequency Off-Center Fed) antenna, often called an off-center fed dipole, is a versatile multi-band wire antenna widely used in amateur radio for its ability to operate across multiple frequency bands without always needing a tuner. The antenna consists of a dipole with two unequal-length legs, typically split at an off-center point, such as one-third and two-thirds of the total length, creating a shorter and a longer leg.



Specifications

Freq. Coverage	80 - 10 meters
Gain	As much as 10dBd*
Radiator Length	133' Horizontal
	22' Vertical
Feed Line	50-ohm coax
Power Rating	1500 W CW/SSB
Support Height	>35'
	Useable at 25'
Radials	Not needed

* Based on user reports, field evaluations, and product reviews. Gain is due primarily to the low angle radiation pattern which doesn't exist in common dipoles.

Features

80, 40, 30, 20, 17, 15, 12, 10 meters
All Bands, ONE ANTENNA
Low Angle DX Radiation Pattern
Excellent Receiving Antenna
Excellent Performance at Low Heights

At this off-center feedpoint, a balun, usually 4:1 or 6:1, connects the coaxial feedline to the antenna, transforming the antenna's higher impedance of 200-300 ohms to match the 50-ohm feedline for efficient power transfer.

By placing the feedpoint off-center, the antenna achieves resonance on multiple harmonically related bands, such as 80m, 40m, 20m, 15m, and 10m, due to the varying current distributions created by the unequal leg lengths, resulting in low standing wave ratio (SWR) on these bands.

Unlike a center-fed dipole where current peaks at the center, the OCF's off-center feed shifts current nodes, enabling multi-band operation while the balun maintains balanced current flow despite the asymmetrical design. The radiation pattern varies by band, resembling a broadside dipole pattern on the fundamental frequency like 80m, but forming complex multi-lobe patterns on higher bands, supporting both near-vertical incidence skywave for local communication and low-angle radiation for long-distance DX contacts.

This design offers simplicity with a single feedline and no need for traps, along with flexibility for installation as a flat-top, inverted-V, or sloper. However, the off-center feed can introduce some RF current on the feedline, necessitating a robust balun or choke, and SWR may be higher on

non-resonant frequencies, sometimes requiring a tuner. Additionally, the radiation pattern on higher bands may include nulls, affecting signal strength in certain directions.

For example, an 80m OCF antenna might be approximately 133 feet long, with a 50-foot short leg and an 83-foot long leg, fed at the junction with a 4:1 balun, effectively operating on 80m, 40m, 20m, 15m, and 10m. Overall, the HF OCF antenna's off-center feed and balun enable its multi-band capability, making it a popular, efficient choice for amateur radio operators seeking a straightforward solution for HF communications.

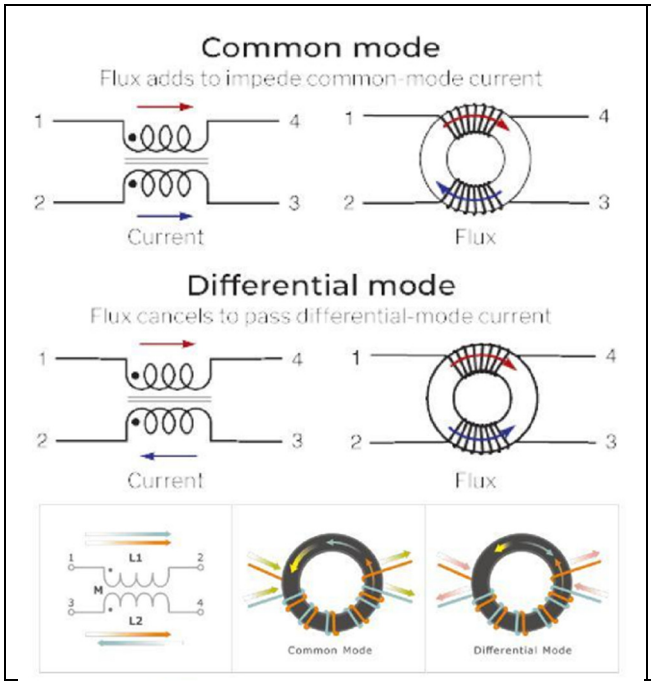
While this is an excellent HF antenna - if you have the space to hang it, an OCF antenna does have some issues.

OCF interference issues

When operating an off-centre-fed (OCF) or another unbalanced HF antenna, many radio amateurs encounter a frustrating issue: distorted audio and noise emanating from an outboard amplified speaker during SSB transmissions. Especially when operating on the 40m band, my family room stereo speakers would come alive with a distorted version of what I was transmitting.

Common mode current refers to RF current that flows equally on the outer shield of the coaxial cable and, in some cases, on other conductors (such as ground wires or audio cables) rather than being confined to the intended differential (inside) path between the center conductor and the shield. This occurs when the antenna system is not perfectly balanced, which is typical for OCF and other unbalanced antennas. This RF energy is not supposed to be present on these conductors, but due to the imbalance in the antenna system, it finds its way in.

Since OCF antennas are inherently unbalanced, they can lead to common-mode currents on the feedline, which then couple into the speaker's wiring, acting as an unintended radiator or receiver of RF energy.

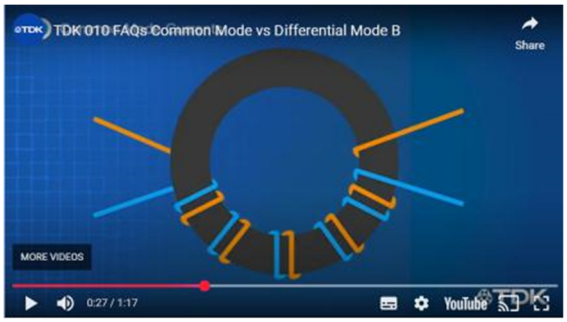


Step in Process	Effect on Audio/Equipment
Common mode current on coax	RF flows on shield, not just inside
RF enters shack via wiring	Couples into audio and control circuits
RF rectified in audio circuits	Distortion, noise, or buzz in output
Amplified by audio equipment	Heard as distorted or noisy audio

So, how do Common Mode Chokes Work?

In normal or differential mode (single choke), current travels on one line in one direction from the source to the load, and in the opposite direction on the return line that completes the circuit. In common mode, the noise current travels on both lines in the same direction

In common mode, the current in a group of lines travels in the same direction so the combined magnetic flux adds to create an opposing field to block the noise, as illustrated by the red and green arrows in the toroid core shown In the diagram *[left]*, In differential mode, the current travels in opposite directions and the flux subtracts or cancels out so that the field does not oppose the normal mode signal



As mentioned, OCF antennas are inherently unbalanced, especially when not properly matched or fed with an appropriate balun. This imbalance causes RF energy to flow not just along the intended path inside the coax, but also along the outside of the coax shield (common mode currents). When these currents reach your station, they can induce RF into audio circuits, control cables, network cables, and even power lines, causing distortion, noise, and erratic behaviour in speakers and other equipment.

This process converts the RF signal into an audible frequency, which is then amplified and heard as distortion, noise, or a "buzz" in the audio output. This phenomenon is sometimes called "RF in the audio" or "RF feedback."

Solutions to Mitigate the Problem

1. Install a Common Mode Choke (Sheath Current Choke)

A common mode choke (also called a feedline choke or sheath current choke) is a device that blocks RF currents from traveling along the outside of your coax. Placing one at the antenna feedpoint and another where the coax enters your station is highly effective. This forces RF currents to stay on the inside of the coax and prevents them from coupling into your station equipment.

2. Use a Proper Balun at the Antenna Feedpoint

A current balun (not just an impedance transformer) is essential for OCF antennas. The balun helps maintain balance and reduces common mode currents. Typical OCF dipoles use a 6:1 balun to match the higher feedpoint impedance (about 300 ohms) to 50-ohm coax.

3. Grounding the Feedline and Equipment

Ground the shield of your coaxial cable where it enters your station. This provides a path for stray RF to dissipate safely to ground, reducing the chance of it entering your audio circuits.

Shield and Filter Audio and Control Cables

Use shielded audio cables and consider adding ferrite chokes to speaker, microphone, and control cables. This solved my family room audio issues., Ferrite beads or snap-on chokes help block RF from coupling into these circuits.

Article courtesy of "The Communicator" from Surrey Amateur Radio Communications (SARC),