



FIVE AND NINE PLUS

**THE OFFICIAL NEWSLETTER
OF THE
APPLEDORE AND DISTRICT
AMATEUR RADIO CLUB**

Club Callsigns: G2FKO and GX2FKO
Website: www.adarc.co.uk

CLUB'S OFFICERS

President	Terry Adams	G4CHD	Committee	Ben Louder	2E0FTZ
Chairman	Mike Wogden	G4KXQ		Mark Wildig	G6BNB
Vice Chairman	David Boyes	2E0KVJ			
Secretary	John Lovell	G3JKL secretary@adarc.co.uk	QSL Manager	John Lovell	G3JKL
Treasurer	Alan Fisher	2E0EUZ	Web Master	John Lovell	G3JKL
			Exam Secretary	John Lovell	G3JKL
			Editor	Mike Wogden	G4KXQ Mikewogden@gmail.com

EDITORIAL

Thanks to everyone who attended the club's Annual General Meeting; it was good to see an excellent turn-out and thanks to all for an interesting evening.

The existing club officials were re-elected. Both Steph M1CVJ and Dave 2E0IXK had indicated their desire to step back from being regular committee members. Mark Wildig G6BNB has kindly stepped forward and volunteered to stand as a committee member. Mark was proposed, seconded, and voted on the committee. Welcome Mark.

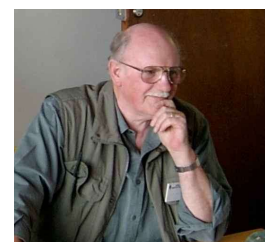
For those who missed the meeting the subscription has increased to £15 per year.

The Jim McPhee cup was awarded to Terry G4CHD in recognition for his many years in producing an excellent newsletter.



MIKE HEWITT G4NCU SK

It is with sadness that I have to inform the members of the passing of Mike Hewitt, G4NCU. Mike was a club member before my time but he was highly regarded being awarded the Jim McFee cup in 1999. I'm sure all members will join me in sending our condolences to his wife Jackie at this sad time.



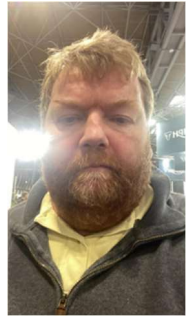
APRIL MEETING DATE CHANGE:

Club meetings are normally held on the third Monday of the Month. In April 2025 the third Monday falls on Easter Monday (21st April), because of this the meeting will be moved by one week and so therefore the April 2025 meeting will be held on Monday 28 April 2025.

I've prepared another mystery talk entitled '£380 for a Geochron? No thanks, I will roll my own', for this meeting.

More will become clear on the night.

The final article for this newsletter is from our newest committee member Mark G6BNB. Mark has had a very successful and varied career; my son and daughter were impressed with the mention of the Harry Potter invisibility clock and they are now aged mid-thirties. I am looking forward to welcoming Mark onto the committee along with his injection of enthusiasm and fresh ideas.



CLUB MEETINGS

Meetings are held on the third Monday of the month at the **Appledore Football Social Club** starting at 7.30pm for 8.00pm. Visitors always welcome. For further information, please contact the Secretary, John.

LOCAL NETS

Weekday Zepp FM Net: Mon/Tues/Thurs/Fri :

145.450MHz - 4pm - 5pm

Wed via GB3DN - 4pm - 5pm Net Control : Len (M0SXY)

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

Two dates for the diary for events outside the normal Monday evening meeting.

- Saturday 7th June is the Annual Bideford Summer Fair & Mayor's Parade - We will again be having a pitch in Victoria Park and intend to operate 1 or 2 HF Stations
- The weekend of 27th and 28th September will be Railways on The Air where we intend to operate for the Bideford Heritage Railway at the old Bideford Railway Station, East the Water.

Enjoy the read.

73 Mike (G4KXQ)

LOCAL REPEATERS/GATEWAYS

Frequencies are those transmitted and received by the Repeater

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 Repeater- Holsworthy Beacon
Repeater TX 145.5875 RX 144.9875, Tone 77Hz, Connection SW AllStar Network (SWAN)
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

ON THE G4KXQ WORKBENCH – IC705

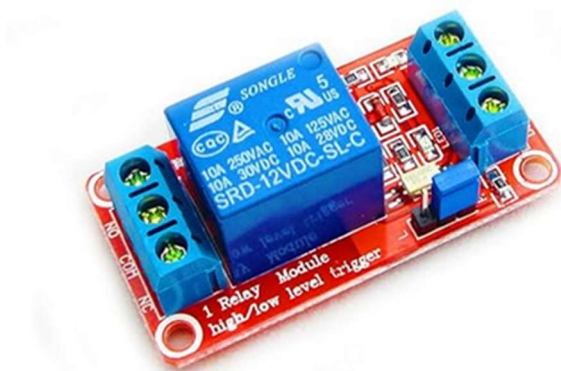
It has been quiet on the KXQ workbench this month. We had a week in Spain staying with old friends Trev EA5NZ (was G3ZYY) and Trish G4KYY in Delores south of Alicante. Trev & Trish have a rural plot located on the agricultural salt plains. Trev's HF setup is an impressive 5 band, 2 element quad at 30 ft driven by a FTDX101D with a 1KW linear. One afternoon during the week we had a QSO on 20M with a mutual friend living in Guildford. The QSO lasted at about 30 mins and as we signed, we were called by a New Zealand station. It was the middle of the night on the other side of the world but he said that we were the only signal he could hear. We exchanged reports of 5 & 9 each way. HF propagation can be amazing from a good location.

The main item on my workbench has been my ICOM IC-705. For Christmas I bought myself a cheap 50W Chinese HF Amplifier.



It's rather a simple device with manual band change and no RF switching. The label next to the 3.5mm socket on the front shows one pin is used for data but no further details were supplied nor is available from my internet searches. I bought the amp primarily to give my 10W signal an extra boost when I'm out in the car activating bunkers. As there is no RF switch, I had to make up a PTT interface from the 705.

The requirement is to ground the PTT pin on the amp to switch to transmit. Most rigs have a simple open collector circuit that grounds on TX. Scattered around the various IC-705 user forums are dire warnings about not pulling too much current through this O/C circuit, max 20mA. I did measure the grounded current using a DMM and it read about 5mA but to be sure I wired up an opto isolated external 12V relay module. For some reason I had bought a box of 10 for a project a few years ago.



Upon wiring up the relay module to the 3.5mm 'SEND' output and a 12V supply I found the relay would not switch. I measured the output from the IC-705 and it did not change when I pressed the PTT. I then substituted the relay module with a simple 1K pull-up for the O/C output, still no change. I was then back digging into the ICOM user forum for advice, but no further comments were forthcoming.

Upon further reading of the manual I found there was a menu option to change the SEND output signals ability to go low can be enabled/disabled on a band-by-band basis.

[MENU] > SET > Connectors > SEND Output

HF	(Default: ON)
50M	(Default: ON)
144M	(Default: ON)
430M	(Default: ON)

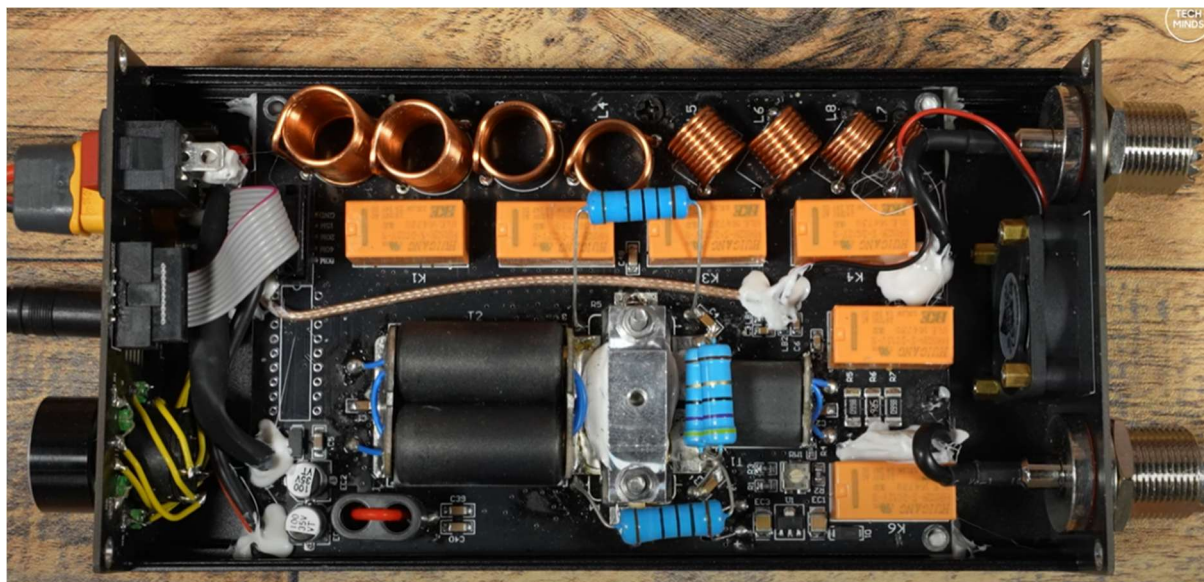
Selects whether or not to switch the SEND terminal output level of the [SEND/ALC] jack to the Low level when transmitting.

- OFF: Does not switch to Low level.
- ON: Switches to Low level.

The default was supposed to be 'ON' but I found the HF selection on mine was set on 'OFF'. It had been like that since I received the rig new, so much for 'Default: ON'. Selecting 'ON' suddenly brought the relay switching to life with a loud clunk. Connecting the relay N/O contacts to the amplifier resulting in RF switching.

Connecting the amp to a power meter and dummy load I achieved 50W from a 5W drive.

I did look at any possible harmonics using my SDR-Play in SA Mode but I didn't find any discernible signals.



Looking inside the amplifier there is a 4-band Low Pass Filter fitted, there are two series inductors per band so a 4th order LC low-pass filter.

Key Facts (for a 4th-order LC low-pass filter):

Roll-off rate:

A 4th-order filter rolls off at 80 dB per decade (or 24 dB per octave) past the cutoff frequency.

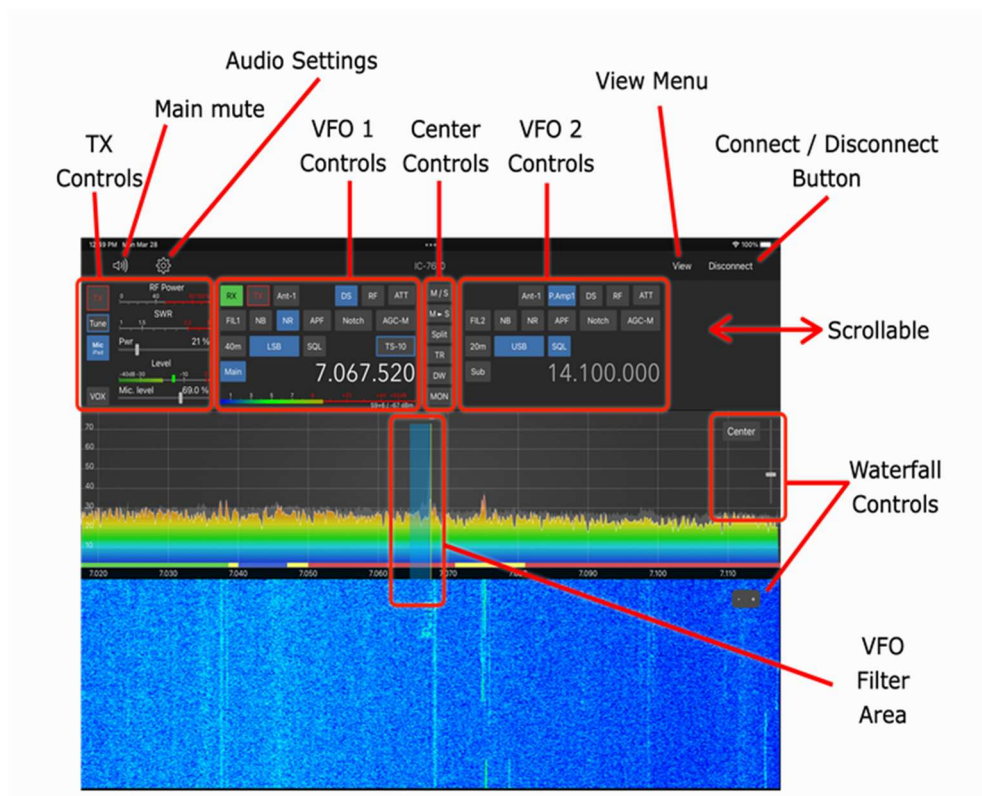
Harmonic Frequency Suppression (approx.)

2nd	$2 \times f_{cf_cfc}$	~48 dB
3rd	$3 \times f_{cf_cfc}$	~68 dB
5th	$5 \times f_{cf_cfc}$	~88–90 dB

In the US the FCC rules are looking for greater than 43dB so the maths seems to add up.

I've had a few QSO's in the shack on various bands so next is to take it out in the field.

Continuing the IC-705 theme, for my birthday I requested an Apple voucher as wanted to obtain a copy of the application: SDR-Control for the iPad . This is a lovely piece of software although a little pricey at £49.99 for the iPad application. The software offers remote control of the IC-705 using Wi-Fi on a local network or using peer-to-peer access mode when remote from a Wi-Fi network. It will even let you operate your rig remotely over the internet. Most of the standard functions of the IC-705 are available on one panel without being buried in menu structures.



Other tools such as DX-Cluster, PSK-reporter and QRZ call-sign lookup are available on the App.

It can remotely operate SSB, FM or even D-Star but it also had an integrated FT8/FT4 mode with integrated log-book. Also built in is a CW Keyer/Decoder and WE-FAX decoder. The CW decoder has the usual problems with hand sent morse but is great during contest when most operators are using computer sent code. If you are an Apple fan-boy and own an IC-705 then I can thoroughly recommend the application which also works with IC-7610, IC-R8600 and IC-7760. The FT4/FT8 application is very usable on the small screen and is ideal for use in portable applications such as POTA, SOTA or BOTA,

The screenshot shows the SDR-CONTROL FT8 application interface. It displays a list of received stations (RX) and transmitted stations (TX) with their respective call signs, frequencies, and locations. The RX list includes stations from Greece, Romania, Finland, Spain, Moldova, USA, and Italy. The TX list includes stations from USA, Spain, and Romania.

Mode	Frequency (kHz)	Call Sign	Location
RX	102545	-1 0.4 1705 ~ CQ SV2JPO KN00	Greece
RX	102545	9 0.4 1754 ~ IZ5RKZ YO8AAZ KN36	Romania
RX	102545	-17 0.4 1997 ~ YO4HQF OH1MAC R-11	Finland
RX	102615	-22 0.3 305 ~ DL8MRE EA5JCG 73	Spain
RX	102615	9 0.4 489 ~ UN7CS EA1DGT IN82	Spain
RX	102615	-16 0.4 581 ~ CQ ERA/IU0KNS	Moldova
RX	102615	-25 0.5 912 ~ CQ W0AQ FN65	USA
RX	102615	-18 0.1 1156 ~ KB3MXK EA1FK IN52	Spain
RX	102615	-14 0.4 1256 ~ OE6TNO <...> -18	
RX	102615	-14 -0.4 1507 ~ OD5ZZ IZ0AYM JN61	Italy
RX	102615	-10 0.4 1673 ~ HB9ZHK EA5IUJ -17	Spain
RX	102615	11 0.4 1754 ~ DL2HWH YO8AAZ KN36	Romania
TX	102515	-19 0.5 913 ~ F6EAZ W0AQ RR73	USA
TX	102531	TX 305 ~ EA5JCG DL8MRE -15	
TX	102545	-17 0.3 304 ~ DL8MRE EA5JCG R-8	Spain
TX	102600	TX 304 ~ EA5JCG DL8MRE RR73	
TX	102615	-22 0.3 305 ~ DL8MRE EA5JCG 73	Spain
TX	102630	TX 304 ~ EA5JCG DL8MRE 73	

SDR-CONTROL FT8 Application.

Contest Calendar April/May

Weekend May 3-4 <ul style="list-style-type: none"> 10-10 Int. Spring Contest, CW F9AA Cup, PSK ARI International DX Contest WAB 7 MHz Phone Weekend May 10-11 <ul style="list-style-type: none"> SKCC Weekend Sprintathon CQ-M International DX Contest 	Weekend May 17-18 <ul style="list-style-type: none"> UN DX Contest Feld Hell Sprint EU PSK DX Contest His Maj. King of Spain Contest, CW Baltic Contest Weekend May 24-25 <ul style="list-style-type: none"> CQ WW WPX Contest, CW
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DX NEWS

DX News is a little quiet these coming month as summer approaches.

April				
2025 Apr22	2025 May01	Tanzania	5H1KB	By DL2SBY fm Zanzibar I; HF; focus on 6m; low power; QSL via DL2SBY direct
2025 Apr25	2025 Apr28	Thailand	E28AM/p	By E20EHQ E21LLR E25GGT E25KFR E25VVE HS1JZT HS5NMF IV3GMZ fm Chang I (IOTA AS-125); 40-10m; CW SSB FT8; holiday style operation
2025 Apr25	2025 May07	Austral Is	TX9A	By 9A2NA 9A3MR 9A9R DK8ZZ fm IOTA OC-152; HF
2025 Apr26	2025 Apr30	French Polynesia	FO	By F4LYI as FO/F4LYI fm Petai I (IOTA OC-067); 40 20 15 10m; SSB; holiday style operation
2025 Apr29	2025 May03	Svalbard	JW	By DK1VK as JW/DK1VK fm Spitsbergen I (IOTA EU-026); 160-10, mainly SSB; 100w; wires
May				
2025 May02	2025 May18	Curacao	PJ2	By PD1DRE as PJ2/PD1DRE; 40 20 10m; SSB FT8 FT4
2025 May04	2025 May26	Cape Verde Is	D4	By DF2WO as D44TWO and KN6ZZI as D44ZZI fm Ponta Achada; 160-10m, incl 60m; SSB CW FT8 FT4
2025 May07	2025 May14	Guernsey	GU6EFW	By ON6EF ON1BN ON7TA ON6VJ ON9DJ ON7VM ON4AML fm IOTA-114; HF incl WARC bands; SSB CW + digital
2025 May09	2025 May11	Guernsey	GU80LIB	By Guernsey Amateur Radio Society; HF; QSL via Club Log OQRS
2025 May13	2025 May18	Honduras	HR4	By PY8WW fm Tiger I (IOTA NA-060); 40-10m; CW SSB + digital
2025 May16	2025 May29	Bonaire	PJ4M	By PH2M fm IOTA-006 (FK52uf); 80-10m; mainly FT8, some SSB; 100w; QSL via Club Log OQRS or PH2M direct (w/3 USD)
2025 May20	2025 May27	Martinique	TO3E	By AB2E fm IOTA NA-107; focus on WARC and low bands; mainly CW, some FT8 RTTY; QRV for CQ WPX CW Contest; QSL via AB2E direct

2025 May22	2025 Jun01	Palau	T8	By JF1GHX as T88FG and JK1SZX as T88SG fm Koror I (IOTA OC-009); 160-6m; SSB FT8; QSL T88FG via LoTW or JF1GHX direct, T88SG via JK1SZX Buro
2025 May27	2025 Jun02	Niue	E6RS	By ZL1RS fm Makefu; 6m, perhaps 10m; FT8 EME; QSL via ZL1RS
2025 May27	2025 Jun02	St Barthelemy	FJ	By NP4G as FJ/NP4G; HF; POTA activation BL-0001; holiday style operation

A SHORT AUTOBIOGRAPHY FROM OUR NEW COMMITTEE MEMBER MARK G6BNB

I started my career as an apprentice with a TV rental company called Rediffusion, and loved every minute of it.

Got the Amateur radio bug in 1981 and was assigned the callsign G6BNB, became the contest manager for the Dover Radio club, G3YMD and had great success with many of the VHF,UHF contests during this period



This was one of the contests working 2M all night, I'm well hidden behind the callsign thanks to Martin G6ASL, also Peter Pennington G4EGQ, and Mike Strange G8VVU

Life got very busy as I became a founder and CTO/MD of one of the biggest global Film and Special effect companies in World 'Smoke and Mirrors' working on some of the largest films and special effect such as:-

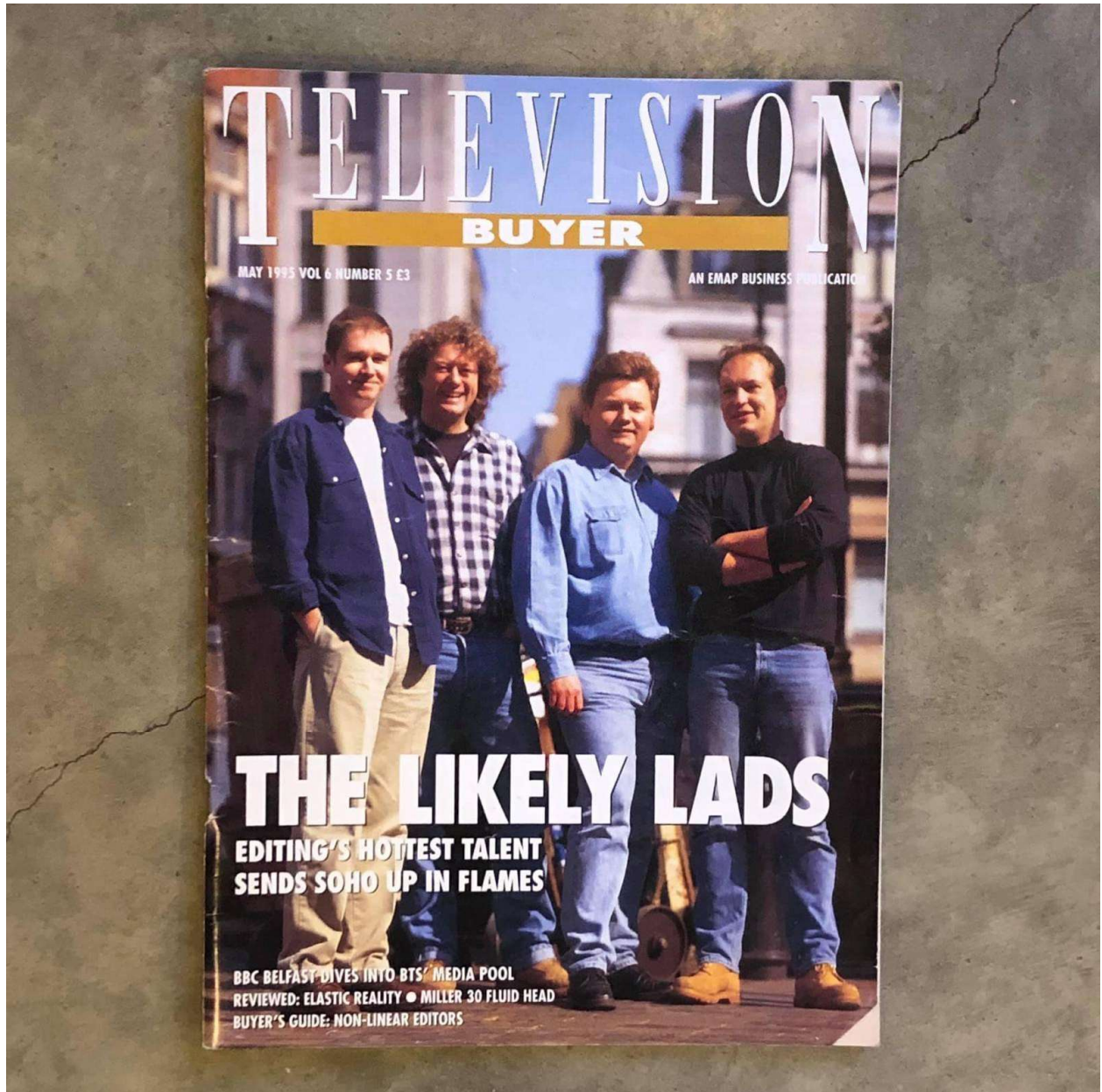
Dire Straits Money for Nothing

Ah Ha Take on me

Harry Potter including the invisibility cloak scene

Many James Bond films including the title sequence for the “world is not enough”

Flying to all corners of the world to build new offices in China, Brazil, NY and India and unfortunately the Hobby had to take a back seat in my life during this time



These are the 4 founders of Smoke and Mirrors back in 1995 when we set up the company NB I was a lot thinner in those days lol!

Now I am “sort of retired” long story!

I've got back into the amazing hobby and wow how its changed, for my G6 licence only letting me work 2m on my Icom IC251 and 70Cm on my IC451 for those of you who can remember these old rigs, to the new digital arena, and being able to work the HF bands, so much to catch up on, but loving every minute of it.

Hope I can bring a few new ideas to the club. Firstly, I would love to create a WhatsApp group if everyone is happy to publish their mobile numbers. This would allow instant communication between all club members please contact me if you would be happy to participate in this.

I would love to encourage a lot more activity on the social media channels

Once I get an nice array set up perhaps we could work a few contests from my QTH (using the club callsign) due to the fortunate high location, I have and an amazing take off high up on the edge of Exmoor National Park