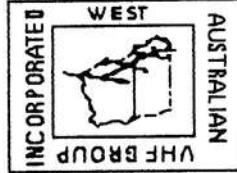


OFFICIAL NEWSLETTER FOR THE WEST AUSTRALIAN VHF GROUP (INC)
 P.O. BOX 189, APPECROSS WA 6153.

MEETINGS ON THE FOURTH MONDAY OF EACH MONTH AT WIRELESS HILL
 TELECOMMUNICATIONS MUSEUM, ALMONDBURY RD, ARDROSS

VK6WH



VK6WH

PATRON MR. F. W. DAYSON

PRESIDENT BOB BLINCO VK6KRC H 277 7049 SECRETARY BOB PINE VK6ZFY H 339 3273
 VICE PRES. PETER TAIT VK6ZPT TREASURER BERT MEUWISSEN VK6ME H 457 3892

COUNCILLOR TERRY LEITCH VK6ZLT H 332 7008	BULLETIN ED.	REQUIRED URGENT
COUNCILLOR BRUCE DOUGLAS VK6BMD	MUSEUM REP	BOB PINE VK6ZFY
COUNCILLOR COLIN MURRAY VK6ZCR	MUSEUM REP.	TOM BERG VK6ZAF
ACTIVITIES TERRY LEITCH VK6ZLT	PUBLICITY	PHIL MALEY VK6AD H 354 4078
MATERIALS COLIN MURRAY VK6ZCR	LIBRARIAN	ILMAR BELTS VK6AIB

CALENDAR

NOVEMBER 18 COMMITTEE MEETING	JANUARY 92 20 COMMITTEE MEETING
23 FOX HUNT	25 FOX HUNT
25 GENERAL MEETING	27 GENERAL MEETING
DECEMBER 8 XMAS DO WIRELESS	FEBRUARY 92 17 COMMITTEE MEETING
HILL 2.30PM.	22 FOX HUNT
	24 GENERAL MEETING

=====

NOVEMBER 1991

WELL HERE IT IS ALMOST XMAS AGAIN AND THIS WILL BE MY LAST BULLETIN FOR THE YEAR AND EVER MORE, AS I HAVE ELECTED NOT TO CONTINUE AS EDITOR OF THE VHF BULLETIN.

SO THIS MEANS THAT WE REQUIRE SOMEBODY TO TAKE OVER AS EDITOR.

IF THERE IS ANYBODY OUT THERE PREPARED TO TAKE OVER WILL THEY CONTACT ME ON 3311398 AT HOME OR 3301554 AT WORK, THE NEXT BULLETIN IS DUE IN JANUARY 1992.

73 COLIN VK6ZCR.

THE VHF GROUP HAS AQUIRED A QUANTITY OF LDF50 COAX AND WILL BE AVAILABLE FROM THIS MONTHS MEETING SO COME ALONG AND PUT IN YOUR ORDER IT'S CHEAP AND GOOD QUALITY TO!
\$3.00 PER METRE.

MOCOM 70 radio's have a 50watt p.a. in them and the VHF group has a quantity of these for sale too. They can be made to work in the 2mtr band.

SELL FM828 OFFERS CONTACT VK6GG QTHR.

SELL ONE COMPUTER XT, 640K RAM, 2 X FDD (360K), 10MBT HDD, MONOCHROME MONITOR, CGA MONITOR (GREEN). \$450 ONO.
CONTACT BERT VK6ME

*** KEPLER DATA from COSMOS converter: NASA ->UOSAT ***

NAME	EPOCH	INCL	RAAN	ECCY	ARGP	MA	MM	DECY	REVN
#AO-10	91286.21700	25.95	119.90	0.6064	284.18	18.83	2.05882	-2.8E-7	3467
#UO-11	91285.59090	97.89	326.09	1.2E-3	151.43	208.76	14.67499	2.4E-5	40666
#RS-10/11	91297.48550	82.93	323.31	1.1E-3	180.61	179.50	13.72223	1.7E-6	21732
#AO-13	91272.93680	56.66	69.24	0.7241	265.94	16.52	2.09708	-1.7E-6	2522
#FO-20	91291.88220	99.04	250.64	0.0541	21.31	340.96	12.83192	4.7E-7	7942
#AO-21	91297.61200	82.95	137.99	3.4E-3	259.33	100.40	13.74420	1.3E-6	3680
#RS-12/13	91296.66820	82.92	8.85	2.8E-3	284.12	75.68	13.73934	1.3E-6	3578
#UO-14	91294.72710	98.66	13.40	1.1E-3	152.98	207.20	14.29308	7.2E-6	9106
#AO-16	91294.68490	98.66	13.78	1.2E-3	150.30	209.88	14.29386	6.8E-6	9106
#DO-17	91293.74710	98.66	12.91	1.2E-3	153.23	206.95	14.29484	7.4E-6	9093
#WO-18	91282.72490	98.67	2.01	1.1E-3	187.36	172.74	14.29495	7.0E-6	8936
#LO-19	91282.69310	98.67	2.05	1.2E-3	187.35	172.75	14.29574	7.1E-6	8936
#UO-22	91293.73640	98.53	6.67	7.3E-4	308.83	51.22	14.36236	9.0E-6	1373
#NOAA-9	91296.57950	99.17	313.18	1.6E-3	65.17	295.11	14.13157	5.8E-6	35365
#NOAA-10	91296.61730	98.56	317.54	1.2E-3	274.80	85.18	14.24334	6.5E-6	26483
#MET-2/17	91296.52620	82.54	318.24	1.8E-3	23.63	336.56	13.84549	1.8E-6	18844
#MET-3/2	91290.49510	82.54	292.66	1.7E-3	171.57	188.57	13.16933	5.1E-7	15509
#NOAA-11	91292.40430	99.05	248.20	1.2E-3	351.08	9.01	14.12342	8.8E-6	15800
#MET-2/18	91296.77080	82.52	195.13	1.6E-3	57.76	302.51	13.84191	3.2E-6	13384
#MET-3/3	91296.89820	82.55	229.74	1.5E-3	175.79	184.33	13.15964	4.3E-7	9588
#MET-2/19	91296.88270	82.54	256.72	1.7E-3	347.98	12.09	13.84021	1.4E-6	6680
#FY-1/2	91297.89880	98.93	328.71	1.6E-3	171.70	188.44	14.01154	1.8E-7	5837
#MIR	91298.24140	51.60	354.49	4.5E-4	15.28	344.83	15.56675	3.8E-4	32544
#SARA	91290.20670	98.53	3.12	4.8E-4	328.24	31.85	14.36098	3.6E-5	1322

73's de Lars! SM5TGU @ SK5UM.#FLEN.D.SWE.EU

WEST AUSTRALIAN V.H.F. GROUP NEWS BULLETIN

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LIBRARIAN)

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CLUB STATION VK6VF

Beacons at TVW Channel 7 Pomeroy Rd, Bickley (Phone (092)93 6323)

Frequencies	52.006MHz	VK6VF	cw	<u>MEETINGS</u> Fourth Monday in each month in the D.C.A Workshop's canteen at 86 Guilford Rd, Maylands at 8pm.
	145.000 MHz	VK6VF	cw	
	Other beacons of interest			
Mr. Barker	144.500 MHz	VK6VE	cw	<u>SUBSCRIPTIONS</u> \$2.50 Payable 1st July each year.
Carnarvon about	52.900 MHz	VK6TS	cw	
Christmas Island	146.00 MHz	VK9XI	cw	
W.A. net Frequencies	52.586	AM		
	52.656	FM		
	146.000	FM		
	

THESE WERE THE OFFICE BEARERS IN 1970 OH !!! THEM WERE THE DAYS.


V.H.F. GROUP CRYSTAL BANK

FREQUENCY IN KHz

ALL \$0.20 EA

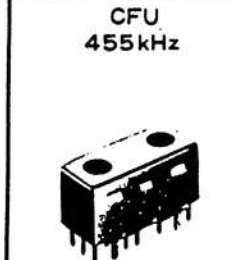
1361.000	3463.000	4918.000	6370.000	6999.000	8938.000
1655.000	3478.500	4960.500	6390.000	7010.000	8939.000
1670.000	3520.000	4980.000	6390.000	7029.500	8952.000
1955.000	3575.000	4990.000	6420.000	7065.000	8965.000
2020.000	3590.000	5020.000	6426.000	7067.000	9215.800
2065.000	3708.000	5070.000	6470.000	7107.000	9275.000
2112.000	3715.000	5110.000	6480.000	7138.000	9393.000
2118.888	3720.000	5145.000	6490.000	7164.000	9394.000
2158.888	3740.000	5270.000	6505.000	7230.000	9665.000
2165.555	3776.000	5300.000	6515.550	7265.000	9743.900
2182.000	3859.500	5440.000	6520.000	7270.000	10012.500
2182.000	3865.000	5440.000	6533.000	7280.000	10245.000
2220.000	3868.000	5498.000	6540.000	7320.000	10371.000
2251.666	3873.000	5499.000	6540.000	7345.000	10396.500
2337.000	3890.000	5505.000	6574.500	7362.500	10413.500
2475.000	3915.500	5506.500	6575.000	7400.000	10438.000
2638.000	4045.000	5554.000	6589.500	7414.000	10439.000
2656.000	4055.550	5603.000	6590.000	7465.000	10497.000
2701.850	4061.110	5604.000	6610.000	7685.000	10530.000
2760.000	4095.000	5630.000	6612.000	8033.000	11228.000
2792.000	4117.200	5638.000	6645.000	8040.000	11294.285
2816.000	4129.900	5641.500	6679.500	8074.500	11299.500
2836.000	4142.777	5660.000	6693.000	8075.000	11467.000
2861.000	4142.777	5664.000	6794.166	8110.000	11796.000
2868.000	4267.777	5666.000	6800.000	8116.666	12700.000
2940.000	4275.000	5671.500	6812.000	8152.000	12768.660
2945.000	4318.000	5673.000	6815.000	8165.000	13058.300
2979.000	4350.000	5680.500	6825.000	8166.670	13116.660
2987.000	4397.770	5682.000	6845.000	8210.800	13288.000
3008.000	4508.000	5825.000	6860.000	8305.800	13296.000
3023.500	4525.000	5828.000	6865.000	8345.000	13304.000
3046.000	4535.000	5865.000	6880.000	8446.000	13304.500
3158.000	4558.000	5945.000	6889.166	8460.000	13336.000
3176.000	4572.770	5950.000	6890.000	8465.000	13344.500
3196.500	4584.900	5954.000	6895.417	8773.600	13522.220
3215.000	4596.111	6120.000	6905.000	8820.000	14788.000
3239.000	4620.000	6130.000	6925.000	8845.500	23570.000
3245.830	4626.111	6238.000	6930.000	8847.000	42133.330
3260.000	4634.444	6245.000	6939.166	8862.500	
3265.000	4642.777	6280.000	6945.000	8871.000	
3382.500	4645.000	6280.000	6945.000	8879.500	
3404.500	4652.000	6280.200	6948.888	8896.000	
3418.000	4665.000	6311.660	6960.000	8896.500	
3435.000	4706.111	6320.000	6965.000	8913.500	
3455.000	4719.440	6335.000	6973.541	8917.000	
3460.000	4845.000	6350.000	6995.000	8922.000	
3460.500	4889.900	6360.000	6998.000	8930.500	

CFT
455kHz




455kHz ± 3.5kHz

CFU
455kHz



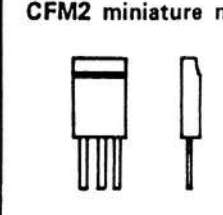
455kHz ± 3.5kHz

CFX
455kHz

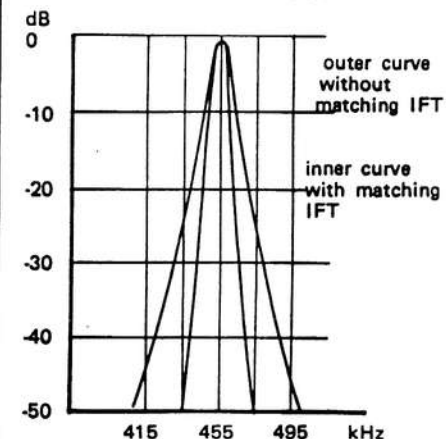


455kHz ± 3.5k

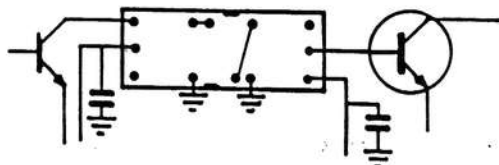
CFM2 miniature mechanical filter unit



Drawn actual size, the CFM2 is a recent development that offers high selectivity in a very small space. The unit makes an ideal interstage coupling, and may be cascaded



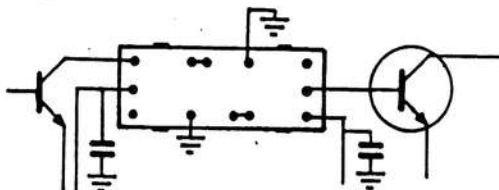
selectivity curves



The CFT series connections

The CFT series of miniature ceramic filters, with a single ceramic element between an input, and an output matching transformer.

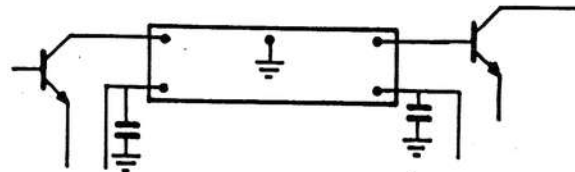
Centre frequency	CFT455B: 455kHz	CFT455C: 455kHz
-6dB bandwidth	8kHz	6kHz
Selectivity at ±9kHz	>19dB	>28dB
Input impedance	300k	300k
Output impedance	5k/50pF	5k/50pF
Passband ripple	<1.5dB	<1.5dB



The CFU series connections

The CFU series are slightly scaled up versions of the CFT series, being based on 10mm matching transformers, as opposed to 7mm types.

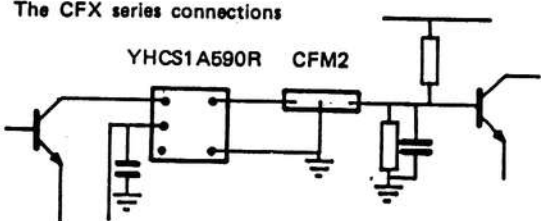
Centre frequency	CFU050D: 470kHz
-6dB bandwidth	6kHz
Selectivity at ±9kHz	>25dB
Input impedance	300k
Output impedance	5k/50pF
Passband ripple	<1.5dB



The CFX series connections

The CFX range are double ceramic filters, with input/output matching transformers. A single CFX exhibits the equivalent selectivity of 6 single tuned IFTs

Centre frequency	CFX014: 455kHz
-6dB bandwidth	5.5kHz
Selectivity at ±9kHz	>40dB
Input impedance	50k
Output impedance	5k/50pF
Passband ripple	<1dB



The CFM 2

The CFM2 is a recent development, based on TOKO's existing low cost mechanical filter technology. The unit is similar in size to the CFS FM types, and thus lends itself to miniaturized receiver applications. It may be readily cascaded (using matched units) to provide selectivity tailored to individual requirements.

Centre frequency	CFM455B: 455kHz
-6dB bandwidth	6kHz
Selectivity at ±9kHz	>16dB [30dB wit h MT]
Input impedance	1k5 [150k with MT]
Output impedance	2k0
Insertion loss	<6dB
Ripple in passband	<6dB

Important note:

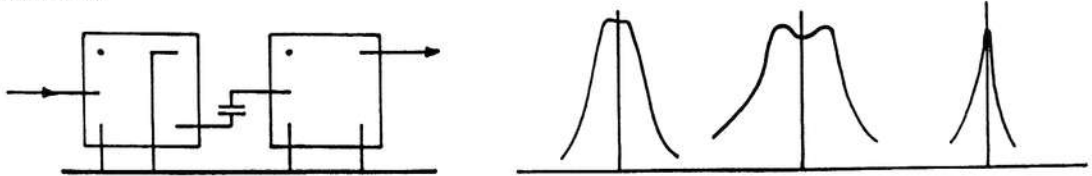
The filters described in this catalogue represent stock lines. For OEM requirements, many different centre frequencies (eg 460 - 468 - 462kHz) and different bandwidths are available to suit customer requirements. A minimum order quantity may apply, but samples are usually available within 2/3 weeks.

Signal coils . Special functions: FM discriminators, TV IFs, and Misc.

Combinations of the IFs shown overleaf are used to perform functions of double tuned IFs, detectors etc. Listed here are the necessary interconnection details, together with the remaining 'standard' coils for TV.

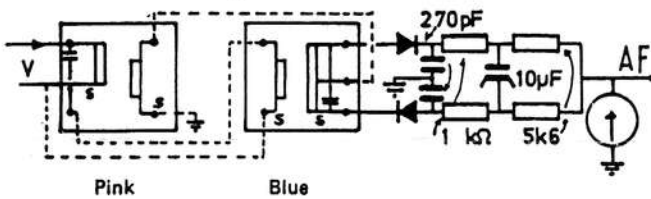
Double tuned AM IF stage

Many combinations of standard AM IF can be coupled together to form a bandpass pair. Best symmetrical response will be achieved by coupling windings of equal impedances. Over coupling will lead to 'double hump' characteristics, and under coupling will simply loose signal unnecessarily - unless an exceptionally narrow bandwidth is required, in which case a ceramic or mechanical filter stage would probably be a better choice.



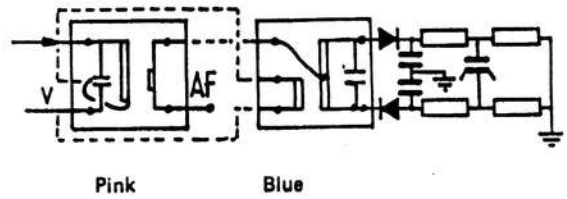
FM ratio detectors

The best all round detector for FM is still the basic ratio detector (in discrete systems, portables etc.) The incoming IF signal should be limited for best AM rejection.



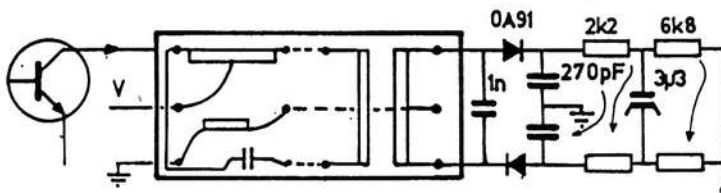
The standard 8448/8449 (10K) 10.7MHz
(TKAC8448PJQ/KAC8449SZ)

Q:65



The standard 10516/10517 (10E) 10.7MHz
(94ACS10516PJQ/94FCS10517STP2)

Q:80



For 455/470kHz applications, the WRHC1A516/7

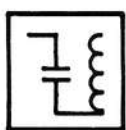
A Q of 100 means that for deviations greater than 7kHz, it may be desirable to reduce the audio output, by damping the tuned circuit with a resistor, until the correct level is achieved.

The circuits shown here illustrate the various configurations of the ratio detector. As you will see, it is possible to extract demodulated AF in two ways - and in both instances, a centre zero tuning meter may be driven from the same point. (Remember to use a high impedance meter, or series resistor in the case of a microammeter). Where the AF level is too high, this indicates that the Q of the unit is probably excessive, and should be damped by a resistor - as this will also improve linearity. The AF DC shift also accurately reflects the conditions necessary for an AFC function, though remember to check the AFC reference voltage on the tunerhead used, since it may be necessary to raise the reference voltage on the ratio-det. from its nominal of 0v on tune.

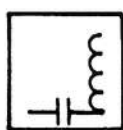
TV coils: Video IF, colour sub carrier, and sound

Coil type number	Colour	Tuning Capacitor	Frequency	Qu	Siemns type	Turns					
						1-3	2-3	1-3	1-6	4-6	3-4
TKXCA34732CQN	White	27pF internal	36MHz	85	D1N					9	
KXCAK3347AHC	White	27pF internal	36MHz	85	D3N					9	
TKXCAK3346AEU	White	39pF internal	41.4MHz	80	D4N			6		9	
TKXCA34735EMD	White	82pF internal	31.9MHz	68	D5N					6	
KXCAK3345AEU	White	27pF internal	31.9MHz	85	[D5N]	11					
KXCAK3344AM2	White	27pF internal	40.4MHz	80	D6N					7	
KXCAK2499ABZ	White	12pF internal	33.4MHz	75	D7N				16		
TXCA34909EMH	White	27pF internal	37MHz	65	D8/9		9		4		
MKANSK1731HM	Black	560pF external	6MHz	75	A1	8					
KANFK2495ET	---	1160pF external	4.43MHz	35	A2					10	5
BKANK3360AGM	Pink	1000pF external	5.5MHz	41	E2	7					

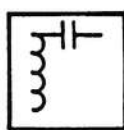
The above coil system is designed for applications in connection with most IC video amps., including TDA440, TDA4400, TDA4420 etc. It is anticipated that further additions to the range will be made available in due course. Also included are coils for TV sound (intercarrier) detection in connection with the TBA120 series.



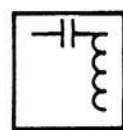
CQN



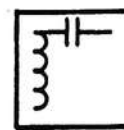
AHC



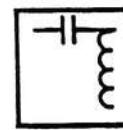
AEU



EMD



AEU



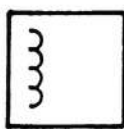
AM2



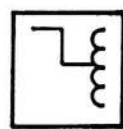
ABZ



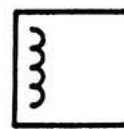
EMH



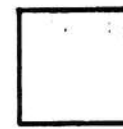
HM



ET



AGM





WA VHF GROUP
Materials Listing

Partnumber	Description	Qty	Price \$
1" VIDICON	VIDICON	12	15.00
1.8-22PF	TRIM CAP(SMALL GRN)	67	0.45
100N	DISC CERAMIC	241	0.10
100N	GREENCAP	100	0.06
10N	DISC CERAMIC 63V	23	0.03
10N	DISC CERAMIC 100V	393	0.15
10N	MIN. PLATE CERAMIC	848	0.10
1N5344	8V2 5W ZENER	17	0.30
1N5370	56V 5W ZENER	24	0.30
1N914	SWITCHING DIODE	40	0.03
1N917B	27V 0.4W ZENER	81	0.10
2N2906	PNP AUDIO GEN PURP	7	0.05
2N4091	NJD FET RF SWITCH	5	0.10
2N5770	NPN UHF SWITCH	246	0.15
BC548	NPN GENERAL PURP.	611	0.15
BFY90	NPN 1GHZ AMP	51	2.00
BK 5-65PF	TRIM CAP (LARGE YELL)	29	0.45
BNC	PLUG	37	3.00
F28	NEOSID SLUG	446	0.08
F29	NEOSID SLUG	107	0.08
FT 2-10PF	TRIM CAP (SMALL YELL)	71	0.45
LED	5MM GREEN	52	0.20
MFE131	NMD MOSFET VHF	16	2.20
MID 1.4-8.5PF	TRIMCAP (SMALL WHITE)	108	0.45
MRF901	NPN 1GHz 2.5db NOISE	22	3.00
MV2209	33PF VARICAP DIODE	34	0.45
PCB LAYOUT TAPE	VARIOUS SIZES	10	4.00
QQE03/20	UHF VALVE 20W	2	5.00

Specials:

VIDICON \$1.00 EA
 100N GREEN CAPS 30 FOR \$1.00
 1N5344 ZENER 5 FOR \$1.00
 1N5370 ZENER 5 FOR \$1.00
 1N917B ZENER 20 FOR \$1.00
 2N2906 TRANSISTORS 7 FOR \$0.20
 BC548 TRANSISTORS 50 FOR \$2.00
 F28, F29 SLUGS \$0.01 EA
 GREEN LED 20 FOR \$1.00
 PCB TAPE 20 X .080", 7 X .026", 12 X .04"
 42 STRIPS .080" DOT, 24 STRIPS 16PIN IC
 THE LOT FOR \$20.00 (VALUE \$135.00)

THE WEST AUSTRALIAN V.H.F. GROUP BULLETIN

NOVEMBER 1991

PERTH
6 - PM
10 NOV
1991
**SURFACE
MAIL**



The West Australian V.H.F. Group (Inc)
P.O.Box 189 Applecross V.A. 6163

