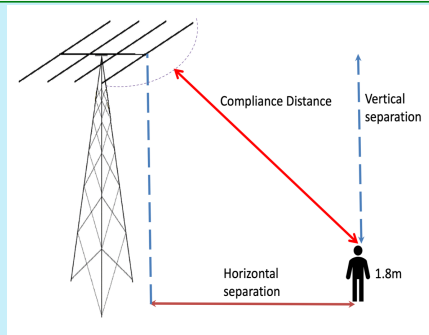


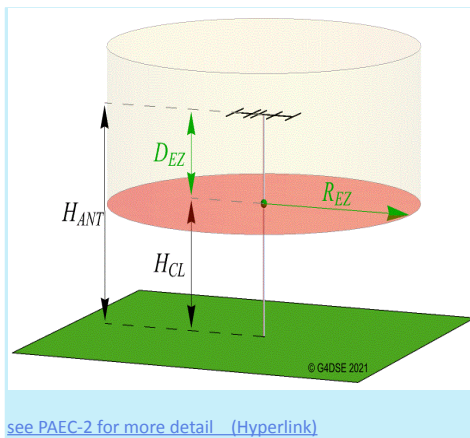
This workbook performs compliance checks to satisfy new EMF amateur licence conditions. It includes the Ofcom calculator (which will not calculate below 10MHz). It also includes lookup tables for the results from PAEC-2 for horizontally polarised Yagi beams above 50MHz. Please feedback on any issues with this trial sheet

Name Richard Samphire		Callsign MB7JNE		Date of Compliance Check 17/11/2021		Station Address Courtlands, Newport Road, Magor. NP263BZ			
Radio Make Motorola		Model GM340		www.rsgb.org/emf					
Notes Click on yellow boxes to select your station setup and operating conditions. Fill in the beige boxes and export or print this sheet to a PDF file as a record of your compliance checks.									
Radio Setup		Band 2m		Feeder				Antenna parameters	
Transmit Mode FM		Frequency MHz 145.5 MHz		Cable Type M&P Ultraflex 7		dB/100m		Antenna type Custom 4.4 dBi	
Transceiver		Transmitter/ linear Power 4.0 W 6.0 dBW		Loss per 100m -6.9 dB		Antenna polarization Vertical		My Antenna Diamond X300	
Mode factor 100.0%		Transmit % in 6 minutes 50.0%		Cable Length m 18.0 m		Other losses dB 0.0 dB		Custom 2.7 4.4 dBi	
Average power from Transmitter 2.0 W 3.0 dBW		Peak Power from Transmitter 4.0 W 6.0 dBW		Feeder loss dB -1.2 dB		Average power into Antenna 1.5 W 1.8 dBW		Mainlobe EIRP 4.1 W 6.1 dBW	
				Peak power into antenna 3.0 W 4.8 dBW		Peak EIRP 8.2 W 9.1 dBW		Directivity Factor -dB 0.0 dB	
								Height of Antenna m 14.0 m	
								Average EIRP 4.1 W 6.1 dBW	
								Peak EIRP 8.2 W 9.1 dBW	
Interpreting the calculator results. First check if low power compliance is flagged in box to right. If not then choose one of the methods below to demonstrate compliance. You can use either the calculator or PAEC's for your compliance check and to define any needed Exclusion Zones.								LOW POWER COMPLIANT no further assessment needed as average power < 10W EIRP & peak power < 100W EIRP	

Compliance check using Ofcom calculations ref ITU-T K.52 ICNIRP 1998 limits	
Reactive Near field zone	0.3 m
Ofcom Compliance Distance	0.6 m
Vertical Separation	12.2 m
Horizontal Separation needed	0.0 m



Ofcom Calculator method



Guidance below from PAEC-2 for Exclusion Zones for horizontally beam antennas above 50 MHz. Using ICNIRP 2020 limits

	m
	m
	14.0 m
	13.1 m

PAEC-2 method for VHF/UHF Beams

Notes: 144.800MHz - APRS gateway. Looking at the logs, in 24257 mins of uptime, MB7UNE has sent 3284 packets. Each packet is just short of 1 second (assume 1 second). So TX % is somewhere around 0.3% of total uptime (convert 3284 seconds into minutes = 55, and then $(55/24257)*100 = 0.3\%$). Using 50% to give a huge margin of error. NoV limits power at back of radio to no more than 4W which is 6.02dBW.