

**British DX Club**

# **United Kingdom on Shortwave**



**featuring**  
**B20 shortwave schedule for Woofferton**  
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**January 2021**

## Woofferton on Shortwave

### Transmissions from Woofferton (Shropshire) 02.43W 52.19N

The Woofferton Transmitting Station is located about three miles south-south west of Ludlow in Shropshire, near to the Shropshire-Herefordshire border. It is owned and operated by Encompass Digital Media (who acquired Babcock Media Services in 2018). The site consists of six 250 kW and four 300 kW shortwave transmitters. It is the last remaining shortwave transmitter site in the United Kingdom.

#### Woofferton schedule for the B20 season effective 25 October 2020-28 March 2021

Time/UTC	Days	Station	Language	Target	kHz	kW (Azi)
0030-0100	Daily	BBC	Dari	Afghanistan	7445	250 (082°)
0100-0130	Daily	BBC	Pashto	Afghanistan	7445	250 (082°)
0130-0200	Daily	BBC	Dari	Afghanistan	7445	250 (082°)
0200-0230	Daily	BBC	Pashto	Afghanistan	7445	250 (082°)
0230-0300	Daily	BBC	Dari	Afghanistan	7445	250 (082°)
0230-0330	Daily	BBC	Persian	Iran	6095	250 (090°)
0300-0500	Daily	BBC	Arabic	North-East Africa	5875	250 (140°)
0500-0600	Daily	ENC registration	unknown	Central-North Africa	5960	300 (180°)
0500-0600	Daily	Radio Ndarason Int.	Kanuri	West Africa	7425	250 (158°)
0529-0600	Daily	BBC	Hausa	West Africa	5975	125 (160°)
0559-0700	Daily	BBC (DRM)	English	Europe	3955	100 (114°)
0600-0629	Daily	BBC	French	North Africa	7265	250 (170°)
0600-0700	Daily	BBC	English	West Africa	7325	300 (180°)
0600-0700	Daily	ENC registration	unknown	Central-North Africa	5960	300 (172°)
0600-0700	Daily	Radio Ndarason Int.	Kanuri	West Africa	9535	250 (158°)
0700-0800	Daily	KBS World Radio	Korean	Europe	6045	250 (102°)
0800-0830	Daily	IBRA Radio	Arabic	Middle East	15260	300 (107°)
1200-1230	Daily	BBC	French	North Africa	15490	250 (170°)
1400-1500	Daily	Voice of America	Kurdish	Middle East	15600	250 (102°)
1430-1500	Daily	Radio Ashna (VOA)	Pashto	West Asia	13860	300 (075°)
1500-1630	Daily	Radio Ashna (VOA)	Dari	West Asia	13860	300 (075°)
1600-1800	Daily	Voice of America	Somali	Horn of Africa	11610	250 (126°)
1630-1700	Daily	Voice of America	Swahili	East Africa	15260	300 (140°)
1630-1700	Mon-Fri	Voice of America	English	North-West Africa	13865	300 (135°)
1700-1800	Daily	IBRA Radio	Arabic	Middle East	9775	250 (105°)
1700-1900	Daily	ENC registration	unknown	North-East Africa	9820	250 (140°)
1730-1800	Mon-Fri	Voice of America	Oromo	Horn of Africa	9485	300 (126°)
1730-1900	Daily	IBRA Radio	Arabic	North-East Africa	9515	250 (122°)
1800-1830	Daily	BBC	French	North Africa	6080	250 (172°)
1800-1900	Daily	KBS World Radio	Russian	Russia	6040	250 (066°)
1800-1900	Daily	Voice of America	Amharic	Horn of Africa	9485	300 (126°)
1800-1900	Daily	Radio Ndarason Int.	Kanuri	West Africa	9635	300 (152°)
1800-1900	Daily	BBC	English	West Africa	9915	250 (170°)
1800-2100	Daily	World's Last Chance	Arabic	Middle East	5910	250 (114°)
1830-1900	Sun	Follow the Bible Ministry	Arabic	North Africa	6180	300 (105°)
1900-2100	Daily	BBC	English	Central Africa	11810	250 (158°)
1930-2000	Daily	BBC	Hausa	West Africa	9545	250 (160°)
2000-2030	Fri	BBC	Hausa	West Africa	9545	300 (160°)
2000-2100	Daily	KBS World Radio	German	Europe	3955	250 (114°)
2000-2100	Daily	KBS World Radio	Arabic	North Africa	6090	250 (172°)
2030-2100	Mon-Sat	Voice of America	Hausa	West Africa	9765	250 (180°)
2100-2115	Daily	Radio Akhbar Mufriha	Tachelhit	North Africa	7300	300 (170°)
2100-2200	Daily	KBS World Radio	French	Europe	3955	250 (114°)

Additional tests from Woofferton may be carried at certain times.

Schedule updated: 12 January 2021

# BBC World Service

## B20 schedule for mediumwave and shortwave transmissions

Transmitter sites used by the BBC World Service on mediumwave and shortwave:

### Longwave

Location	Abbrev.	Power used (kW)
Droitwich, UK	dro	500 kW

### Mediumwave

Location	Abbrev.	Power used (kW)
Dushanbe, Tajikistan	dsb	100 kW
A'Seela, Oman	sla	800 kW
Zakaki, Cyprus	zak	500 kW

### Shortwave

Location	Abbrev.	Power used (kW)
Ascension Island	asc	125/250 kW
Dhabbaya, Abu Dhabi, UAE	dha	250 kW
Yerevan, Armenia	erv	300 kW
Grigoriopol, Moldova-PMR	kch	300 kW
Talata Volonondry, Madagascar	mdc	250 kW
Moosbrunn, Austria	mos	300 kW
Tinang, Philippines	pht	250 kW
Pinheira, Sao Tome	sao	100 kW
A'Seela, Oman	sla	250 kW
Santa Maria di Galeria, Vatican	smg	100/250 kW
Kranji, Singapore	sng	100/125/250 kW
Kostinbrod, Bulgaria	sof	250 kW
Tashkent, Uzbekistan	tac	100 kW
Trincomalee, Sri Lanka	trm	125 kW
Woofferton, UK	wof	100/250/300 kW

### World Service in English

Times/UTC	Days	Language	Target	kHz
0000-0100	Daily	English	South Asia	5845-erv 5970-sla
0100-0520	Daily	English	Europe	198-dro
0100-0200	Daily	English	South Asia	1413-sla 5945-erv 12095-sng
0200-0230	Daily	English	South Asia	1413-sla
0300-0400	Daily	English	West Asia	6195-sla 7285-sla
0400-0500	Daily	English	East Africa	9915-mdc
0400-0500	Daily	English	West Asia	7285-sla 12095-sla
0500-0600	Daily	English	Central Africa	6195-asc
0500-0600	Daily	English	East Africa	13860-dha
0500-0600	Daily	English	Southern Africa	12095-mdc
0500-0600	Daily	English	West Africa	5875-smg 6005-asc
0559-0700	Daily	English	Europe	3955-wof - DRM
0600-0700	Daily	English	Central Africa	7445-asc 12095-smg
0600-0700	Daily	English	East Africa	13860-mdc
0600-0700	Daily	English	Southern Africa	9410-sao 15400-mdc
0600-0700	Daily	English	West Africa	6005-asc 7325-wof
0700-0800	Daily	English	Central Africa	9410-sao 15490-smg
0700-0800	Daily	English	Southern Africa	12095-sao 15400-mdc
0700-0800	Daily	English	West Africa	7325-sao 9915-asc
0759-0900	Daily	English	South Asia	15620-sng - DRM
1000-1030	Tue-Sat	English	Central Asia	1251-db
1000-1200	Daily	English	South-East Asia	6195-sng 9580-sng 9900-sng 11945-sng
1200-1300	Daily	English	East Asia	11850-sng
1200-1300	Daily	English	South Asia	12065-sla 15310-sla
1300-1330	Daily	English	Central Asia	1251-db
1300-1400	Daily	English	South Asia	1413-sla 9410-sla 12065-sng

1400-1500	Daily	English	South Asia	1413-sla
1500-1600	Daily	English	East Africa	9410-sla
1500-1600	Daily	English	West Asia	7485-sng
1500-1600	Daily	English	South Asia	1413-sla
1600-1700	Daily	English	Central Africa	17830-asc
1600-1700	Daily	English	East Africa	7445-mdc
1600-1700	Daily	English	Southern Africa	12065-dha 17640-asc
1600-1700	Daily	English	West Asia	7485-sng
1600-1700	Daily	English	South Asia	1413-sla
1700-1800	Daily	English	Central Africa	17830-asc
1700-1800	Daily	English	East Africa	7445-mdc
1700-1800	Daily	English	Southern Africa	7265-mdc
1700-1800	Daily	English	West Africa	15400-asc 17780-asc
1700-1800	Daily	English	West Asia	6195-sla 7485-sng
1700-1800	Daily	English	Cental Asia	1251-db
1700-1800	Daily	English	South Asia	1413-sla
1800-1900	Daily	English	Central Africa	11810-asc
1800-1900	Daily	English	East Africa	9410-dha
1800-1900	Daily	English	Southern Africa	7265-mdc
1800-1900	Daily	English	West Africa	9915-wof 15400-asc
1800-1900	Daily	English	West Asia	6195-sla 7485-sng
1900-2000	Daily	English	Central Africa	11810-wof
1900-2000	Daily	English	East Africa	9410-dha
1900-2000	Daily	English	Southern Africa	6195-sao 7265-mdc
1900-2000	Daily	English	West Africa	12095-asc
1900-2000	Daily	English	Middle East	1413-sla
2000-2100	Daily	English	Central Africa	11810-wof
2000-2100	Daily	English	West Africa	12095-asc
2000-2100	Daily	English	Middle East	1413-sla
2100-2200	Mon-Fri	English	Central Africa	11810-asc
2100-2200	Mon-Fri	English	West Africa	12095-asc
2200-2300	Daily	English	East Asia	5960-sla
2200-2300	Daily	English	South-East Asia	3915-sng 3960-sng 5845-sng 6150-pht 6195-sng 7300-sla
2300-0000	Daily	English	South-East Asia	3915-sng 3960-sng 5845-sng 6195-sng 11825-pht

### **Arabic to North Africa and the Middle East**

<b>Times/UTC</b>	<b>Days</b>	<b>Language</b>	<b>Target</b>	<b>kHz</b>
0300-0400	Daily	Arabic	North Africa	639-zak 5875-dha 5995-dha
0300-0400	Daily	Arabic	Middle East	720-zak
0400-0500	Daily	Arabic	North Africa	639-zak 5875-dha
0400-0500	Daily	Arabic	Middle East	720-zak
0500-0600	Daily	Arabic	North Africa	639-zak 12015-dha
0500-0600	Daily	Arabic	Middle East	720-zak
0600-0700	Daily	Arabic	North Africa	639-zak 15315-sla
0600-0700	Daily	Arabic	Middle East	720-zak
1500-1600	Daily	Arabic	Middle East	702-sla 720-zak
1600-1700	Daily	Arabic	Middle East	702-sla 720-zak
1700-1800	Daily	Arabic	North Africa	9585-dha
1700-1800	Daily	Arabic	Middle East	702-sla 720-zak
1800-1900	Daily	Arabic	North Africa	639-zak 9585-dha
1800-1900	Daily	Arabic	Middle East	702-sla 720-zak
1900-2000	Daily	Arabic	North Africa	639-zak 6150-dha
1900-2000	Daily	Arabic	Middle East	702-sla 720-zak
2000-2100	Daily	Arabic	North Africa	639-zak 6150-sla
2000-2100	Daily	Arabic	Middle East	702-sla 720-zak

### **Bengali to South Asia**

<b>Times/UTC</b>	<b>Days</b>	<b>Language</b>	<b>Target</b>	<b>kHz</b>
1330-1400	Daily	Bengali	South Asia	9510-sng 9900-trm 11750-sla
1630-1700	Daily	Bengali	South Asia	7265-sla 9585-sng

### Burmese to South-East Asia

<b>Times/UTC</b>	<b>Days</b>	<b>Language</b>	<b>Target</b>	<b>kHz</b>
0000-0030	Daily	Burmese	South-East Asia	7465-sng 9560-sng 15310-pht
1330-1400	Daily	Burmese	South-East Asia	7485-sng 9560-pht 11995-sng

### Dari and Pashto to West Asia

<b>Times/UTC</b>	<b>Days</b>	<b>Language</b>	<b>Target</b>	<b>kHz</b>
0030-0100	Daily	Dari	Afghanistan	1413-sla 5930-mos 7445-wof
0100-0130	Daily	Pashto	Afghanistan	5930-mos 6195-sla 7445-wof
0130-0200	Daily	Dari	Afghanistan	5930-mos 6195-sla 7445-wof
0200-0230	Daily	Pashto	Afghanistan	5875-erv 6195-sla 7445-wof
0230-0300	Daily	Dari	Afghanistan	5875-erv 6195-sla 7445-wof
0300-0330	Daily	Pashto	Afghanistan	7300-dha 7445-erv 9410-dha
0830-0900	Daily	Dari	Afghanistan	12065-sla 15310-sla
0900-0930	Daily	Pashto	Afghanistan	12065-sla 15310-sla
0930-1000	Daily	Dari	Afghanistan	12065-sla 15310-sla
1000-1030	Daily	Pashto	Afghanistan	1251-dsb(su/mo) 12065-sla 15310-sla
1030-1100	Daily	Dari	Afghanistan	12065-sla 15310-sla
1100-1130	Daily	Pashto	Afghanistan	12065-sla 15310-sla
1400-1500	Daily	Dari	Afghanistan	5975-sla 7465-sng
1500-1600	Daily	Pashto	Afghanistan	5975-sla 7465-sng
1600-1630	Daily	Dari	Afghanistan	5975-sla 7465-sng
1630-1700	Mon-Fri	Pashto	Afghanistan	5975-sla 7465-sng
1630-1700	Sat/Sun	Dari	Afghanistan	5975-sla 7465-sng
1700-1800	Daily	Dari	Afghanistan	5875-erv 6090-sla 7465-sng
1800-1830	Daily	Pashto	Afghanistan	1413-sla 5875-erv 6090-sla 7465-sng
1830-1900	Daily	Pashto	Afghanistan	1251-dsb 1413-sla 5875-erv 6090-sla 7465-sng

### French to Africa

<b>Times/UTC</b>	<b>Days</b>	<b>Language</b>	<b>Target</b>	<b>kHz</b>
0600-0629	Daily	French	West Africa	5875-asc
0600-0629	Daily	French	North Africa	6135-smg 7265-wof
0600-0629	Daily	French	Central Africa	7305-asc
0700-0729	Daily	French	West Africa	7305-asc
0700-0729	Daily	French	Central Africa	17830-sao
1200-1230	Daily	French	North Africa	15490-wof
1200-1230	Daily	French	West Africa	15640-asc
1200-1230	Daily	French	Central Africa	17765-asc
1800-1830	Daily	French	North Africa	6080-wof
1800-1830	Daily	French	Central Africa	6180-sof
1800-1830	Daily	French	West Africa	7220-smg 15490-asc
1800-1830	Daily	French	Indian Ocean	9750-smg

### Hausa to West Africa

<b>Times/UTC</b>	<b>Days</b>	<b>Language</b>	<b>Target</b>	<b>kHz</b>
0529-0600	Daily	Hausa	West Africa	5975-wof 6135-asc 7305-asc
0629-0700	Daily	Hausa	West Africa	5975-asc 7305-asc 17830-dha
1400-1430	Mon-Fri	Hausa	West Africa	15400-asc 17780-asc 21630-dha
1930-2000	Daily	Hausa	West Africa	9545-wof 11660-asc 15490-asc
2000-2030	Fri	Hausa	West Africa	9545-wof 11660-asc 15490-asc

HFCC registrations for Saturday only broadcasts during English Premier League football season:

1130-1700	Sat	Hausa	West Africa	17780-asc
1700-1930	Sat	Hausa	West Africa	15685-asc

### Kirundi/Kinyarwanda to the African Great Lakes Region

<b>Times/UTC</b>	<b>Days</b>	<b>Language</b>	<b>Target</b>	<b>kHz</b>
0500-0600	Sat	Kirundi	Great Lakes	13790-dha 15490-erv
0529-0600	Sun	Kirundi	Great Lakes	13790-dha 15490-erv
1630-1700	Mon-Fri	Kirundi	Great Lakes	9820-dha 15420-mdc

### Korean to East Asia

Times/UTC	Days	Language	Target	kHz
1530-1830	Daily	Korean	East Asia	5845-pht 5895-dsb 7355-sng

### Horn of Africa Service

Times/UTC	Days	Language	Target	kHz
1730-1750	Mon-Fri	Amharic	Horn of Africa	7425-smg 9600-sla 12095-dha
1750-1810	Mon-Fri	Oromo	Horn of Africa	7425-smg 9600-sla 12095-dha
1810-1830	Mon-Fri	Tigrinya	Horn of Africa	7425-smg 9600-sla 12095-dha
1830-1850	Mon-Fri	Amharic	Horn of Africa	7425-smg 9600-sla
1850-1910	Mon-Fri	Oromo	Horn of Africa	7425-smg 9600-sla
1910-1930	Mon-Fri	Tigrinya	Horn of Africa	7425-smg 9600-sla

### Persian to West Asia

Times/UTC	Days	Language	Target	kHz
0230-0330	Daily	Persian	West Asia	5930-tac 6010-sof 6095-wof 7485-kch
0330-0430	Daily	Persian	West Asia	1251-db 1413-sla 6010-tac 6095-sla 7485-kch
0430-0530	Daily	Persian	West Asia	9410-dha 11905 sla 13750-tac
1500-1600	Daily	Persian	West Asia	5875-tac 6195-sla
1600-1700	Daily	Persian	West Asia	5875-sof 6195-sla
1730-1830	Daily	Persian	West Asia	5935-sof
1830-1930	Daily	Persian	West Asia	6140-sof

### Somali to the Horn of Africa

Times/UTC	Days	Language	Target	kHz
0400-0430	Daily	Somali	Horn of Africa	11995-mdc 13790-dha
1100-1130	Daily	Somali	Horn of Africa	15420-dha 17745-mdc
1400-1500	Daily	Somali	Horn of Africa	12095-mdc 15420-sof 17745-dha

HFCC registrations for Saturday only broadcasts during English Premier League football season:

1130-1500	Sat	Somali	Horn of Africa	15420-dha 17745-dha
1500-1700	Sat	Somali	Horn of Africa	12095-sof 15420-dha
1700-2000	Sat	Somali	Horn of Africa	7335-sof 9465-dha

### Tajik to West Asia

Times/UTC	Days	Language	Target	kHz
0200-0230	Daily	Tajik	West Asia	1251-dsb
0930-1000	Daily	Tajik	West Asia	1251-dsb
1400-1500	Daily	Tajik	West Asia	1251-dsb
1800-1830	Daily	Tajik	West Asia	1251-dsb

### Uzbek to West Asia

Times/UTC	Days	Language	Target	kHz
1300-1330	Daily	Uzbek	West Asia	1251-dsb



# Woofferton Shortwave Station

*From the script of AWR "Wavescan" DX Programme Nos 533 & 535*

## 1. Woofferton Shortwave Station: First Era

A total of 183 acres was acquired near the village of Woofferton, a property in the extreme south of Shropshire, that straddles the east west boundary between the two counties, Shropshire and Herefordshire. These two shires lie against the English border with Wales, and the boundary between the two shires is a small stream which runs through the antenna field of the shortwave station.

Work began on this new property in 1942, and a building was constructed to house six new RCA 50 kW shortwave transmitters Model MI7330 from the United States and all of the ancillary equipment. Due to the fact that this station was being constructed upon a low lying area where the water table was only a few feet underground, RCA transmitters were chosen because they did not need a basement level like the English made Marconi transmitters at that time. However, the first shipment containing much of the electronic equipment from the RCA factory in Camden, New Jersey was lost when the ship that was on convoy from the United States was sunk by a German submarine. Subsequently, five more shipments were sent on separate occasions, and finally all of the needed electronic equipment was assembled and installed into the new transmitter building at Woofferton.

A total of 15 triangular transmission towers were erected, ranging in height from 150 to 325 ft. These towers collectively were assembled with nearly half a million nuts and bolts, and the total weight for any one of the taller towers was just on 100 tons. A total of 26 curtain antennas was suspended from the towers; behind each of the 13 active arrays was a passive earthed reflector.

Installation of the six transmitters began in February the following year (1943), and they were installed in pairs with thick bomb proof walls in between. The first four units were taken into regular service for the Voice of America on 17 October 1943, and the remaining two were activated in the same way during the next month, on 21 November. The BBC also utilised this new station for the broadcast of its own programming to overseas target countries. However, less than a year later on 28 August 1944, the station was closed so that needed parts could be removed and installed at Crowborough. The transmitter site at Crowborough was already in use as the secret underground location for Aspidistra, where three American mediumwave transmitters at 175 kW each, which, when combined, provided a massive output power of 500 kW.

The RCA transmitter parts when installed at Crowborough were planned for use in disabling the guidance systems in German V-bombs that were aimed at London. That was the conclusion of the First Era at the BBC-VOA shortwave station at Woofferton.

## 2. Woofferton Shortwave Station: Second Era

However, the suggested procedure at Crowborough proved to be ineffective; consequently the parts and pieces of the six RCA transmitters were re-assembled and renovated and reinstalled back at Woofferton. Of these Senders, as the BBC called their shortwave transmitters, numbers S85 and S86 were taken back into full service in October of that same year (1944), and two more, S83 and S84, were returned to full service in January of the following year (1945). Likewise, Sender S81 was reintroduced into full service during the next year again, on 1 May 1945 West Africa. Thus 5 of these original 6 RCA transmitters were now all back on the air at Woofferton once more.

By the end of World War II, the entire electrical grid in England was showing signs of old age and excessive wear from over-usage, and there was also a shortage of coal at the generating plants. Thus in October 1947, the Woofferton Shortwave Station was required to use its own generating capability for four hours daily.

The three generators, rated at 750 horse power at 500 revolutions per minute, emitted a thunderous roar, and the exhaust turbo chargers emitted a high pitched scream, the combined noise of which could be heard for miles. This ear damaging situation pervaded for a period of some eight months, up until total grid power was resumed in May of the next year 1948. However by this time, the BBC was becoming financially strapped, and as an economy measure, the Woofferton Shortwave Station was closed and the staff were dismissed just a month later, on 26 June 1948. That was the conclusion of the Second Era at the BBC-VOA shortwave station at Woofferton.

### **3. Woofferton Shortwave Station: Third Era**

But, that was not the end of the Woofferton Shortwave Station. Once again, the Voice of America to the rescue! Give three weeks more, and VOA took over the Woofferton Shortwave Station. VOA programming for 8 hours a day was transmitted on shortwave from the United States to England, and it was received at the BBC Receiving Station at Tatsfield, Kent. From Tatsfield the programming was fed by wire to Bush House in London, and from thence onward to Woofferton. At this stage, 5 of the 6 RCA transmitters were in still use, and likewise all of the same original 26 curtain arrays.

As on previous occasions, BBC programming was also heard again from Woofferton. Ten years later again (September 1958), the sixth RCA transmitter was activated at Woofferton; apparently the remaining silent transmitter from the original 6 had been renovated and taken back into service.

Three years later, on 26 March 1961, the BBC dropped its programming from Woofferton, thus leaving VOA as the sole user of the Woofferton Shortwave Station. That was the conclusion of the Third Era for the BBC-VOA shortwave station at Woofferton.

Once again, the Voice of America to the rescue.

### **4. Woofferton Shortwave Station: Fourth Era**

Because of the Cold War standoff between Russia and the West, and the accompanying Berlin Blockade with the building of the Berlin Wall, the Woofferton station once again assumed its importance in the shortwave radio world. Suddenly, on 13 September 1961, the Woofferton Shortwave Station was again on the air full time 24 hours a day with a program relay from both the BBC in London and the Voice of America in Washington DC.

However, the old original 50 kW RCA transmitters were now ailing, their usefulness was ended, and they needed to be replaced. In addition, much higher power was now needed in order to cover the desired target areas with an adequate shortwave signal. The Voice of America funded the installation of 6 new Marconi transmitters at 250 kW each, Model No BD272, and they scrapped all of the old RCA transmitters, though two were retained for spare parts, S85 and S86. The first of the new 250 kW transmitters was taken into service on September 30, 1963, and all 6 were in regular service just 18 months later, with now an antenna field of 35 antenna systems, mostly curtains. However, by that stage, the BBC had withdrawn its programming from the station, thus leaving once again just the VOA on the air from the Woofferton Shortwave Station.

Interestingly, a 100 kW Marconi transmitter Model B6123 was temporarily installed at Woofferton, in the space previously occupied by the silent 50 kW RCA S85. This new transmitter, listed as Sender 107, was destined for installation at the BBC Relay Station near Tebrau in Malaysia and it underwent an era of testing at Woofferton beginning on 29 March, 1971. Programming for these unpublicised test transmissions was a relay of the BBC World Service in English.

Programming from VOA in Washington DC continued on air from Woofferton during this Fourth Era, up until the year 1980, when VOA implemented another modernisation plan. That was the conclusion of the Fourth Era at the BBC-VOA shortwave station at Woofferton.

### **5. Woofferton Shortwave Station: Fifth Era**

The Fifth Era at the Woofferton Shortwave station began in the year 1980, with another spate of development and modernisation by the Voice of America.

Final remains of the original 50 kW RCA transmitters were removed, leaving just the 6 Marconi made 250 kW units, Model BD272 in place. In this 1980 renovation and upgrade, 4 additional new Senders were installed at Woofferton by VOA, and these were Marconi transmitters rated at 300 kW each, Model B6124. In addition, the 3 power generators were also removed. Full power was applied to all four new transmitters in December 1980, and they were taken into regular broadcast service in September of the following year (1981).

Give nearly 16 more years, and the Woofferton Shortwave station was sold off to a management company, Merlin, in April 1997. That was the conclusion of the Fifth Era at the BBC-VOA shortwave station at Woofferton.



## 6. BBC Shortwave Transmitting Station Woofferton: Sixth Era

The Sixth and current era at the Woofferton Shortwave Station began in April 1997 when Merlin took over the station as a private commercial enterprise; the station was no longer owned and operated as a BBC shortwave station nor as a VOA shortwave station. Two remarkable endeavors were implemented at the Woofferton Shortwave Station under the ownership and management of Merlin (and the subsequent owner organisations - VT, Babcock and now Encompass) during this past quarter century of privatisation. These two endeavors were another upgrade of shortwave transmitters, and the surprising number of other broadcasting entities that sought international shortwave coverage from this large station.

During the years 2006 - 2008, four new high power shortwave transmitters were installed at Woofferton, all made by RIZ in Zagreb Croatia. These analog transmitters are also DRM compatible and they are rated at 250 kW and 500 kW.

The current deployment of transmitters at the Woofferton Shortwave Station is as follows:- Marconi 2 250 kW 1963 Marconi 4 300 kW 1980 RIZ DRM also 1 500 kW 2006 RIZ DRM also 3 250 kW 2007 - 2008

During the past quarter century, more than 25 different radio organisations have been on the air from the Woofferton Shortwave Station, in addition to the BBC itself and also the Voice of America. Christian religious organisations have included HCJB Quito Ecuador, IBRA Radio, TWR Africa and Family Radio in Oakland California.

Among the various government-operated shortwave stations, the following have provided programming for broadcast from the Woofferton Shortwave Station: Radio Australia, Deutsche Welle Germany, Radio Taiwan International, KBS South Korea, Radio Polonia Warsaw Poland, Voice of Vietnam, NHK Tokyo, Radio Canada International and Radio Wales.

Unknown at the time, Radio Netherlands has on occasions transferred its shortwave programming from its home based shortwave stations to Woofferton during times of maintenance and development; and likewise the

United Arab Emirates has also transferred its schedule of international programming to Woofferton in times of outages at its large shortwave station at Al Dhabbaya.

Although the BBC has never regularly issued specific QSL cards for its broadcasts from Woofferton, most of the other stations have done so, including Deutsche Welle, Radio Australia, Radio Canada International, and a host of other stations.

*Sender 93 - one of the vintage Marconi transmitters installed in 1963, still in daily use. Photo shows Alan Pennington next to the transmitter during the BDXC visit to Woofferton in November 2017.*

This feature was published in BDXC's "Communication" magazine in August 2019



## Reflections on the BBC transmitting station at Woofferton by Alan Hardy (June 1994)

The BBC Transmitting Site at Woofferton first came into operation in 1943 as a result of wartime expansion in external broadcasting. Initially, there were six 50 kW shortwave transmitters with aerial systems beamed in several directions, directed by the needs of the time.

The BBC Transmitting Site at Woofferton first came into operation in 1943 as a result of wartime expansion in external broadcasting. Initially, there were six 50 kW shortwave transmitters with aerial systems beamed in several directions, directed by the needs of the time.

The Woofferton site is located 52°18'N or about three miles south-south west of Ludlow in Shropshire, near to the Shropshire-Herefordshire border. Quite an area is now covered by the array of aerials on the site, which cater for the six 250 kW and four 300 kW transmitters used for shortwave broadcasting. In addition, the BBC South Shropshire relay of Radio Shropshire is located at this site, operating on 1584 kHz with 500 Watts.

After the end of the Second World War, and at the beginning of the Cold War era in 1948, Woofferton became the site of the Voice of America shortwave operations in the UK. The transmitters were operated by the BBC on behalf of the VOA (the first VOA broadcasts from the UK took place over BBC long and mediumwave transmitters in February 1942).

The Woofferton site was an early example of shortwave transmitting sites outside of the US which could get a stronger signal into target areas this side of the Atlantic because of greater nearness. From Woofferton, two networks were developed; the 'Blue Stars' and the 'Grey Stars', which combined broadcast in total about sixteen hours a day. The target areas were Central and Eastern Europe, the Balkans and Near East, plus European Russia. Latterly, broadcasts to Africa were also made from Woofferton.

Over the years, VOA has introduced and expanded other sites in Europe and North Africa which has reduced Woofferton's present output to a level less than has been seen in the past. Indeed, with the collapse of Communism in recent years, former RFE/RL transmitters at Gloria in Portugal have become available to VOA and a new site in Morocco has been set up, perhaps at the expense of Woofferton.

With this, though, the BBC has filled available airtime with a few relays of Radio Japan and Radio Canada International in addition to its own transmissions.

However, VOA still broadcasts some vital output from Woofferton. The schedule on the opposite page lists several frequencies for the Serbian and Croatian services, beamed to the war-torn former-Yugoslavia, and some transmissions in languages of the former-Soviet Union also originate from Woofferton.

Living in Knighton, 18 miles west-north west of Woofferton, it gives the writer a good opportunity to listen to groundwave from this site. Reception is best during summer months when the lower shortwave frequencies tend not to be used or don't propagate well to the UK as when they do for the rest of the year. 6040 kHz is a good example between 1630-2200, offering excellent reception in summer with only a half-length telescopic aerial on my radio-cassette comparable, say, to Radio 4 on longwave.

As to the future of Woofferton, we will have to wait and see. Perhaps there will be more in the way of relays from Radio Japan and CBC, and others as well in this era of relay exchanges. VOA's output may also be dictated by world affairs, so further changes in the number of hours used from Woofferton may take place. Whatever the outcome, VOA's association with the site will be fondly remembered.

Alan Hardy - June 1994 (this article originally appeared in *Communication* in July 1994)

*Editor's note: Alan was a BDXC member for several years and sadly passed away in November 1999.*



## Focus on the BBC at Woofferton by Alan Hardy (August 1998)

The origin of the BBC transmitter site at Woofferton goes back to 1943. Woofferton itself is a village on the A49 between Ludlow and Hereford, three miles south of Ludlow and twenty two north of Hereford. The actual transmitting site sits astride the Herefordshire-Shropshire border, the complex stretching from Shropshire into Herefordshire.

In 1943, on response to the radio expansion of the BBC's external services, the site at Woofferton came into being. The initial complement of transmitters consisted of six 50 kW units. By April 30th 1944, the BBC's external services had reached their wartime peak with 35 shortwave transmitters in use, plus three mediumwave transmitters and one longwave transmitter. These were used for three European services and two Overseas services.

By the end of the war, there was over-capacity and in 1948 the transmitters were operated by the BBC to relay Voice of America programmes. In effect, Woofferton became a VOA relay site, similar to Munich, Tangier and Salonica.

Over the years, the initial 50 kW transmitters were replaced by 100 kW units, until the current complement of six 250 kW and four 300 kW transmitters existing today were arrived at.

In 1991, the BBC shortwave site at Daventry closed down, leaving Skelton in Cumbria and Rampisham in Dorset as the homes for BBC shortwave transmitters, in addition to the third site at Woofferton.

Nowadays, in addition to the BBC and VOA, Woofferton transmitters are also currently used to relay Radio Japan, CBC, Radio Korea and RFE/RL. In addition to the ten shortwave transmitters at Woofferton, there are now additional ones for BBC Radio Shropshire on 1584 kHz and FM for coverage of South Shropshire.

Those are the facts about Woofferton, but to me personally at 56 years of age, Woofferton and the countryside surrounding it holds a semi-mystical fascination. My first knowledge of Woofferton goes back to reading the Guide to Broadcasting Stations published annually over forty years ago.

All shortwave stations over 1 kW were listed, according to frequency and wavelength, and at the back of the book they were listed by country and frequency. In the main text at the foot of the pages were notes stating "BBC Overseas transmitters are located at Skelton (Cumberland), Daventry (Northants), Woofferton (Shropshire) and Rampisham (Dorset)". Daventry has since gone, could Woofferton be the next?

My second experience was a result of travelling by train from Manchester to the south-west of England on holiday. The train left at 23.15 with a single locomotive engine hauling twelve carriages at a slow pace. Not getting a seat, I sat on a suitcase in the corridor and dozed off, only to be woken when the train stopped at signals. Checking my watch, it was 03.45 and looking out of the window there was a vast aerial field in sight. When the train moved, a sign saying "Woofferton Junction Signal Box" appeared. This was the Woofferton transmitter site that I had read about!

Ten years later, in 1970, I saw the transmitter site again whilst on holiday in the area. Situated in South Shropshire/North Herefordshire, with Wales in the west and England to the east, the countryside looked magnificent and it made a great impression on me, so much so that ten years later I left the north-west and settled in the Welsh Borderland at Knighton (Powys).

Living locally, a few years ago I had the pleasure of speaking to a resident of Woofferton, now in his mid-eighties, and he distinctly remembered the site being developed, for or by the BBC, whilst working as an agricultural worker during the war in 1943.

Every time I see the aerial arrays, which are visible for miles around, I remember the hot stuffy night in August 1960 and the diesel fumes from an overworked British Railways locomotive!

Alan Hardy - August 1998 (this article originally appeared in Communication in September 1998)

## British DX Club visit to Woofferton (October 2017)

In October 2017, twenty BDXC members gathered at Woofferton for a much anticipated tour of the transmitter site. Read the report by Alan Pennington of this enjoyable day here: <http://www.bdx.org.uk/woofferton.pdf>