

## SCU-NEWSLETTER No. 4-15 Saturday, July 11, 2015

### 1. Sad News.

If necessary, I start SCU-Newsletters with news of departed colleagues. Sadly, I must report the death of my friend Len Digby. Len joined Special Communication Unit - SCU 7 in 1943 preparing for the re-entry into Europe. He continued his Morse training and in 1944 was ready to go with SCU8 - in a mobile wireless van to send the secret ULTRA from Bletchley Park out to Army Commanders on and after 'D-Day'. The team's van was actually a converted US Army Dodge Ambulance that I had helped build at the HQ of MI6 (Section VIII) at Whaddon Hall some - five miles west of Bletchley Park. He was allocated with several others to be with General 'Bill' Simpson's 9<sup>th</sup> US Army. After landing in France, it was later involved in the Ardennes, then crossed the Rhine and became the first US Army to cross the River Elbe. Our wireless and cypher team with the 9<sup>th</sup> numbered under twenty, and were the only British soldiers - amongst the tens of thousands of US troops in the US Army. Until recently, he attended all our SCU/RSS reunions at Bletchley Park. A truly nice man and I am amongst the many who will miss him. A group photograph of him a recent talk at Bletchley Park is in item 6 below.

### 2. Our Ascension - agent to aircraft wireless system ...*now recently brought into sharper focus for me!*

For the benefit of the many new SCU-Newsletter readers, I should explain that I worked for MI6 (Section VIII) based at Whaddon Hall during World War II. It was the Communications division of SIS (or MI6, as it was more widely known at the time). Its Controller was Brigadier Richard Gambier-Parry, described in 'MI6' *The Official History of the Secret Intelligence Service* - published in 2010 - as '*...the brilliant Richard Gambier-Parry!*'

One of our best-kept secrets was our use of air-to-ground contact to agents in occupied Europe called 'Ascension.' This arose from the need to put more agents into the countries overrun by German forces. Suddenly, this has been brought into sharp focus for me, as I will explain at the end.

Their contact would be by wireless of course but that posed no special difficulty - if the agent was reasonably competent with Morse? However, less skilled - so *slower* operators - faced the danger of German DF (direction finding) units tracing them. The same was true of new potential agents being selected to go into Europe. Whilst they might be suitable in many ways with a wide knowledge of the language and people, they were seldom skilled at sending Morse - then the best way to rapidly transmit intelligence back to the UK.

Of course, Section VIII held Morse and wireless training courses. Firstly, in 1939 these were held at Bletchley Park, then after its move from Bletchley Park to nearby Whaddon Hall. Later, these took place in our London Training School at 23 Hans Place - behind Harrods. (See David Bremner in Chapter 36 of 'The Secret Wireless War.'

There they were taught Morse, about our wireless sets and operational schedules, by Bert Gillies and David Bremner of MI6 (Section VIII) - but Morse took time to learn from scratch to an acceptable level.

At the end of 1940, Richard Gambier-Parry decided it was essential to find a simpler way for agents in occupied countries to pass intelligence information back to the UK. He called a team together consisting of Wilf Lilburn from Philco as its leader, Bob Chennells and Alfie Willis also from Philco. The final member was Dennis Smith who had been personally recruited by Gambier-Parry whilst Dennis was in Paris before its fall - where he was working for the Free Polish and Czech wireless stations.

The concept was to enable an agent to make contact verbally to an aircraft flying above or nearby rather than using Morse - with the problems that brought with it - like lack of Morse operating speed and the danger of thus being located by DF. Experimental work started and it was decided to use state-of-the-art narrow band FM modulation

Wherever space allowed in the aircraft, they were to use a Hallicrafters S27 receivers but Bob Chennells was given the task of designing and building a smaller receiver for use where operating conditions were cramped. An ancient Avro Anson was acquired for experiments and Dennis Smith was sent off to the Shetlands where he set-up a W/T station as a base. By this time the team consisted of just Dennis and Wilf Lilburn.

The experiments from the Anson to the ground base - replicating an agent on the ground - went well. However, on the way back the aircraft lost use of an engine and they just made it to the airfield at Wick. They left the old Anson there and had to return to Whaddon by train!

Aircraft were in desperately short supply at that time. The next aircraft they managed to get hold of was a Fairey Battle that had been withdrawn from operational duty. They fitted it out at nearby Cranfield and then continued with the experiments. The next aircraft acquired was a Vickers Wellington. This was being widely used as a bomber by this time but they found that the famous Geodetic design by Barnes Wallis made the use of the skin as a reflector more difficult than other aircraft.

Next came the Douglas Havoc (called the Boston by the RAF), to be quickly replaced by the Lockheed Hudsons and the Venturas of 161 Squadron at Tempsford in Bedfordshire, Another Squadron fitted with Ascension flew North-American Mitchells, based at Hartford Bridge (now called Blackbushe), near Camberley in Surrey.

I will explain the gear fitted by Section VIII and then about the individual aircraft. The main *receiver* was to be the Hallicrafters S27 made in the USA incidentally, supplied via my father's wireless stores at Whaddon. However, where space was limited in the aircraft and the S27 could not be used, we fitted the smaller receiver designed by Bob Chennells and made in our workshops.

All aircraft were fitted with a Whaddon-designed and made *transmitters*. The valves in the airborne transmitters were RCA and they were, (so far as Dennis can recall): 1 x 6c5 oscillator, 1 x 6v6 frequency doubler, 1 x 6n7 discriminator, 2 x 6v6 drivers into 2 x 829 output valves. The output was around 150 watts on a narrow bandwidth FM. The frequency used on these operations was around 40 m/cs.

The aerials were based on Dr. Yagi's design concepts and on the Hudson and Ventura were fitted through the nose – as seen in the famous picture taken in North Africa - see page 3. In all other cases, they were through a dipole or in a trailing wire called a 'Random' wire. This was paid out and drawn back in - on a kind-of large fishing reel!

The ground or 'base' station set for the agent was complete in a small case and very light, at about 10 kilos. It was designed to work off 110 volts a/c. The valves were all RCA and consisted of 1 x 6c5 oscillator, 1 x 6v6, 1 x 6n7 – into 1 x 832. The base station random length aerial was usually contained within a washing line supplied with the set. Output was about 10 watts narrow waveband FM – with frequency of 40m/cs.

The SOE 'S' phone is not comparable to our Ascension receiver - designed for an entirely different purpose. The 'S' Phone was very directional and low power. The SOE 'S' Phone was useful for directing an aircraft to its receiving zone but not for passing long messages and making recordings.

Dennis told me about Ascension's range and of one occasion when a Mitchell aircraft was in the region of Paris – and made contact with Base here. He had also carried out trials with the system to Tempsford from Flamborough Head – a distance of over 300 miles.

### Now to the aircraft used:

**Avro Anson.** The one used by us based at Little Horwood was in the bright yellow of training aircraft. The one illustrated is the normal camouflage colouring that would have been on the elderly Anson in the Ascension tests back in 1941.



We still had an Anson based Little Horwood airfield - near Whaddon Hall - and I flew with Dennis several times testing his new trial sets. The pilot was always Maurice Whinney.

**Fairy Battle.** This aircraft was withdrawn from service as it was considered virtually obsolete by the time the war started. Nevertheless, some were used in a vain attempt to stop the Blitzkrieg in France and Belgium but suffered terrible losses. Dennis and Wilf Lilburn did their early tests on a Fairy Battle at Cranfield.

**Vickers Wellington.**

Widely used as a bomber until the later 4 engine aircraft like the Halifax, Sterling and Lancaster became available. This was constructed in the famous 'Geodetic' design by Barnes Wallis. That made using the skin as a reflector for a fixed dipole - more difficult than in other aircraft.



**Douglas Havoc - also known as the Boston.**

This was one of the first aircraft fitted with our Ascension wireless was used operationally for a while along the coasts of France, Belgium and Holland. Those thus fitted - flew mainly from Tempsford but also perhaps from Hartford Bridge.



Amongst the SIS members of MI6 (Section VIII) was Squadron Leader Maurice Whinney RAF and he was on operations from Tempsford in the earliest days of Ascension in the Douglas Bostons - before they were withdrawn.

**Lockheed Hudson.** This was a superb aircraft for agent work and many were based at Tempsford in 161 Special Duty Squadron. It utilised a short take off that meant it could land and take off agents and material in small landing fields – mainly in occupied France. A number were fitted with Ascension gear with the Yagi aerials on the front.



**The Lockheed Ventura** was larger than the Hudson but of a very similar design and that illustrated was one of several sent to the North African zone to operate to agents in the northern shores of the Mediterranean with its Ascension aerial plainly visible.

What makes this doubly interesting to me, is that it shows Wilf Lilburn - one of the co-designers of Ascension - in the centre of the group. Wilf lived with us at Caterham in Surrey during much of 1939, whilst working on the nearby transmitter station for use by the our wireless station at Barnes – alongside the Thames.



It also shows one of the several Packards sent out to North Africa in 1941 as 'A Detachment' - SLUs (Signals Liaison Units) to receive ULTRA traffic from Bletchley Park. ULTRA Messages were sent by teleprinter from Bletchley Park to the MI6 (Section VIII) wireless transmitter at Windy Ridge in Whaddon Village some five miles west of Bletchley Park. Then transmitted to our SLUs (Signals Liaison Units) in the Field.

### **North American Mitchell.**

These were based at Hartford Bridge near Camberley in Surrey. The airfield is now called Blackbushe. I flew with Dennis on a number of occasions, after we checked or added, yet another of his brilliant 'devices'!



Dennis was under clear orders from Gambier-Parry not to allow 'anyone' under 19 to go on operations. When we were over the English Channel for an hour or so, I was not told whether we were operational or not? However, when they 'tested guns' I knew we might be *somewhere* near France but afterwards Dennis did not say whether we had been operational - and I did not dare ask at the time!

If it was Ascension operating, then its range was easily 150 miles but 'Ginger' had to be more targeted so one had to be clearly over the 'target' agent. Mitchells used the trailing wire and not the Dr. Yargi 'Cowcatcher' aerals used on the Lockheed Hudsons and Venturas.

**Short Sunderland flying boat.** (*Though clearly not flown from Tempsford's grass airfield!*) Dennis fitted one of these with our gear and it was used over or rather *near* Norway.

### **De Havilland Mosquito.**

Used on pinpoint operations. Dennis fitted several of these with Ascension gear and the antenna was on a wire from a spar between the pilot and the tail. Dennis went on early operations but had to lay with the gear in the bomb bay - and at 6'3" - it must have been uncomfortable - *not to say rather dangerous!*

### **General notes - plus those from Dennis Smith in later letters to me:**

In operations, for example over France, a Frenchman or French linguist would usually be on board but later it became the practice to have an RCA wire recorder as well. However, on the Mitchells from Hartford Bridge - the so-called tests became something more on two occasions when over the Channel and at much greater height, I now understand that we were operational!

When I started to write 'The Secret Wireless War' in 1997, one of the earliest colleagues I contacted was Dennis at his home in Adelaide, South Australia. Sadly he was then unable to help, due of his continued connection, with SIS. However, in an e-mail on 3<sup>rd</sup> December 2006 - and knowing I was going to give a talk about Ascension - he started to answer some of my questions but first adding '*Having been subjected to positive vetting a number of times, it is only now that I may speak on some subjects*'. He then gave me significant further information about our work on Ascension and later on other items of our work in Mobile Construction.

Perhaps one of my most exciting moments was during a short test flight in a Mitchell. I was sitting in the co-pilots seat when the pilot suggested I take over! With shaking hands I held it on a straight course for about ten minutes. That really was a 'Wow' moment for a very young man - just 18!

There were a number of Mitchells on the airfield. Whilst the flight crews were the typical mix of British and Commonwealth, sometimes there was a Frenchman on board. With recording gear on our receivers both ends used One Time pads.

These flights were part of my exciting life in Dennis's Mobile Construction with its small team of 6 or 7. Some of us were closely involved in many wide ranging responsibilities that ranged from the aircraft - I have mentioned to MGBs (Motor Gunboats), MTBs (Motor Torpedo Boats) down in Devon, belonging to 'Slocum's Navy' and importantly - fitting out the SLUs for D-Day that handled ALL the outgoing ULTRA from Bletchley Park to the Allied Military Commanders on and after 'D-Day' - the mysterious MFUs at Teignmouth in Devon - and much more besides!

I have always been grateful to Dennis for the opportunity of working with such a skilled engineer, the exciting life I experienced with his team and the personal kindness he showed me. I think for both of us, the later e-mail exchange about Ascension was a trip down memory lane. I wrote a short 'Eulogy' to Dennis in SCU-Newsletter 4-11 and let me know by e-mail if you want another copy. *A really super chap!*

**Why has this just '.... now recently brought into sharper focus for me!'**

### **5. Tempsford Veterans and Relatives Association (TRVA)**

Earlier this year, I was made aware of the **Tempsford Veterans and Relatives Association (TVRA)**. They held a meeting on Saturday 27<sup>th</sup> June and I was invited to attend. I was hugely pleased to be made a member and presented with their badge in silver, depicting the three runways at Tempsford. Based there for most of the war - were 161 and 138 Special Duty Squadrons but the Lockheed Hudson's we fitted with Ascension and I flew in - were in 161.

We went to the airfield and spent time in its interesting museum, then a gathering at 'Gallipoli Farm' that contains memorials to those who were lost and wreaths and messages abound. Very moving! From there to Tempsford Village and a pause at the 'Wheatsheaf' a traditional English pub - right opposite St. Peter's Church for a Church Service. By now, those attending were well over a hundred. After the service, we walked through the village to its Memorial Hall where we faced with an excellent buffet and a private bar! I was introduced to many of the relatives but sadly there were no others present who had actually flown from Tempsford during the war.

I am very grateful to Bob Body its leading organiser and two of the team - Martyn Cox and David Briggs. Bob picked me up at Richmond on the Friday and took me to a hotel near Tempsford - where some twenty or so members were staying. After these most interesting and enjoyable events, Bob brought me home to Richmond late on Saturday. I thank these gentlemen for their kindness and welcoming me into the Tempsford Veterans and Relatives Association. I talked with a number of those present - so they are now all in receipt of this - and future SCU-Newsletters.

### **6. Len Digby and Wilf Neal - two of those with our SLUs attached to the US Army in France.**

I am later going to write about our SLUs with the Allied armies in France. However, in view of the demise of Len Digby I have decided to include a rare picture taken some seven years ago at Bletchley Park. The meeting was to show the close links that existed between Bletchley Park (BP) and the US forces.

It was organised by Kelsey Griffin of BP - and one of its most famous cryptographers - Mavis Batey. **Left to right standing:**

**Len Digby:** An operator in one of our Dodge SLUs handling ULTRA from Bletchley Park sent via our wireless station in Whaddon Village directly into the centre of General 'Bill' Simpson's 9<sup>th</sup> US Army.

**Geoffrey Pidgeon:** One of Dennis Smith's small team who fitted out the Dodge vans with our wireless gear for the SLUs attached to US Army Generals, on and after 'D-Day'.

**Wilf Neal:** Also one of MI6 (Section VIII) wireless operators but in our SLU at the HQ of General George Patton's 3<sup>rd</sup> US Army.

**Seated:** Mavis Batey.



With kind regards to you all,

**Geoffrey**

Richmond

Saturday, July 11, 2015