

**NIGHT  
PASSAGE  
TO  
NORMANDY**



**Decca  
1944~84  
Navigator**



*A personal record of the opening phase of D-Day by*

*Lieutenant-Commander Oliver Dawkins, R.N.V.R.*

*Originally published by Decca in 1969, the 25th anniversary of D-Day, 'Night Passage to Normandy' is here reprinted to mark the 40th anniversary in 1984.*

*On D-Day the purpose of the radio position-fixing service was first to guide the leaders of the minesweeping flotillas on the exacting task of clearing the prescribed paths through the enemy minefields: later the leading landing craft of the force were to pass with the aid of their own Decca Receivers through the narrow swept channels to arrive precisely at the required points on the coast line. Lt.-Cdr. Oliver Dawkins, R.N.V.R., was a specialist navigating officer in the Senior Officer's ship of a flotilla of minesweepers. The following are extracts from a personal record.*

'The enemy knows that we intend to invade, and can surmise within certain limits where we shall land. The unknown factor is the exact time and date.'

There was not much comfort in these words spoken by a senior officer at the briefing for one of the many exercises we were conducting during April and May of 1944.

I had been appointed Flotilla Navigator to the senior ship of a new flotilla of fleet sweepers. The ship was completed and commissioned in 1943, and was fitted with every possible device for sweeping moored and ground mines. Built at Belfast these Algerine class ships had a complement of 8 officers and 110 men. Also attached to us for operational duties were four dan-laying trawlers and two minesweeping M.Ls.

Our primary function during the assault was to clear and mark a narrow passage through a known enemy minefield for the first wave of landing craft and bombarding cruisers. Small spar buoys were laid by the trawlers astern and the motor launches searched ahead of the leading sweeper. Mines set just below the surface to sink a ship of our shallow draught were a recent hazard of the normal coastal convoys, and could be expected in a big field of moored mines.

The difficulty for a navigator when conducting a clearance of moored mines is the strength and direction of the tide. Apart from the constant change on the surface, it is not always known what variations are taking place below in deeper water more affected by the formation of the sea bed and adjacent land formation with river estuaries. A 600 fathom sweep wire towed below a ship's 9ft 6in. draught may be affected by a totally different tidal stream from that felt by the ship on the surface.

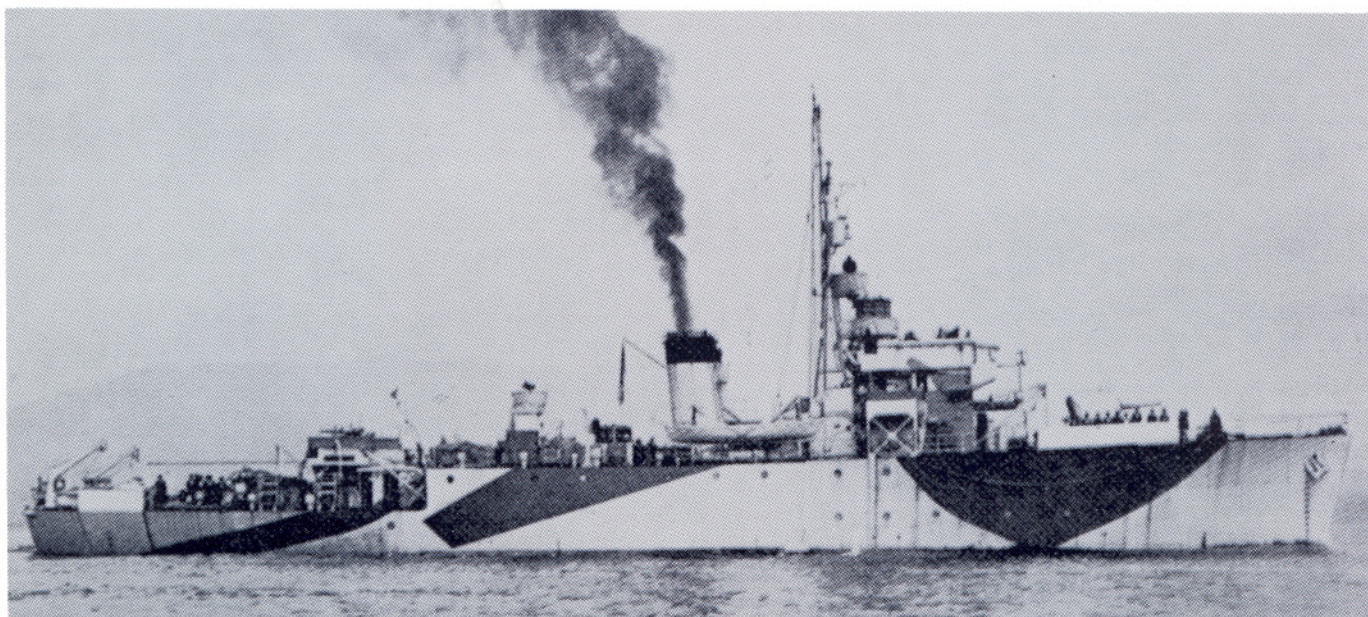
Most of my training and operational experience had been mine search and clearance. We could usually plan to work with, or against, the general direction of the tidal stream, but now we faced the most awkward conditions. The lane had to be perfectly straight for 92 miles right across the widest part of the English Channel and with the tide at its strongest, first on the starboard beam, and then changing to the port beam.

We had been experimenting for some time with the flotilla doing cross tide sweeping, checking the width of swept area, and estimating the spread of wire when turning with the sweeps still veered. Night sweeps were carried out with our dan-laying trawlers and methods tested for marking these small spar buoys.

All the known aids to navigation were used. Plotting table, taut wire measuring gear with a recorder in the chart house. This gave me the actual distance over the ground, but could not show the tidal set to port or starboard. We even had an R.A.F. 'Gen' box which was used by the Pathfinder bombers for blind bombing the occupied countries of Europe. All these things, and still there was some element of doubt that we could put the army ashore at the exact spot opposite their first objective. Then at the last moment we were fitted with the 'Blue Gasmeter Job'. Because of the need for maximum security nothing was ever spoken of by its correct name. The Decca Navigator was the Q.M. outfit to the Admiralty, and the 'Blue Gasmeter Job' to us. Gee, the Royal Air Force, 'Gen box' was Mickey Mouse to us. Radar, the Egg Boiler. My captain said the charthouse was a room full of comic whizzers.

After one of the biggest and most elaborate full dress rehearsals we sailed to Harwich from Portsmouth for a quick boiler clean.

*Below: H.M.S. Vestal, a commissioning picture of the Fleet Minesweeper leaving dock with the Senior Officer Minesweeping Flotilla 6 aboard.*





On arrival a secret signal came from the operations room, and the captain told me to leave right away for the Admiralty Signal Establishment in Surrey. I had no idea what I was sent to collect, and was surprised to see the pilots of some of the other sweeping flotillas tumble out on the same train the next morning.

We were met by car and driven through wooded lanes to an old manor house which spread its grounds far away over the surrounding downland. After an introductory talk on the problems of the leading ships, we were piled into yet another truck and again driven through wooded lanes in the glorious sunshine, down a grassy track and finally through a gate to stop by an old black barn. There was no sign of activity but for the cattle grazing nearby. I began to wonder if our instructor would roll back a slab of stone, or knock some code on the barn door before we could enter. We were I think carefully observed from a window before being shown into a concrete floored room full of work benches. On these were the first Decca Navigators and some five or six very youthful electrical experts, putting the finishing touches to a mass of valves and wires which were mercifully to be covered with a large blue canister. My only concern was with two small dials and a couple of switches. We were shown how to operate these machines and given a dummy run. Thus the results of years of research and patient endeavour were put before us in a matter of minutes. Decca had made something that seemed to do the impossible. It gave me a constant plot on two dials of the ship's position at any time I cared to read them.

I had found the tuning and interpolation of signals from the R.A.F. 'Gen box' rather tiring with the added troubles of jamming by the enemy.

The changing wavelength of the transmitting station had kept me very busy on exercises. If this new outfit worked I could keep a constant plot of the ship's movement in relation to the sea's bed simply by reading the figures on the two dials, and plotting on a special grid on my charts.

We were to be right in the middle of the whole front. Canadian troops to the east and Americans to the west. If I made an error in my final position, the cumulative effect over 30 miles of beach either side would be disastrous. The Canadians could be pushed into Le Havre or the Americans into Cherbourg.

Going back in the train I felt wonderfully elated. I was going to be part of the greatest amphibious operation in history. I had started my war service in combined operations when it did not even bear that name, so I knew some of the problems the landing craft had to face. I had been 'Pilot' under various captains and had four years' operational minesweeping behind me.

We had a happy ship, and a fine company of sailors.

When I saw the details of a test we were to carry out, as soon as this latest wonder was installed, the pattern of all the previous exercises fell into place and now I could see an arrow pointed right across the widest part of the Channel. I felt eager to start at once so sure was I that we should succeed. When I mentioned something of my feelings to one of the other pilots he said 'Well, of course, you realise we are consumable stores'. Even this gloomy outlook did not kill the mood, after seeing this new navigational aid.

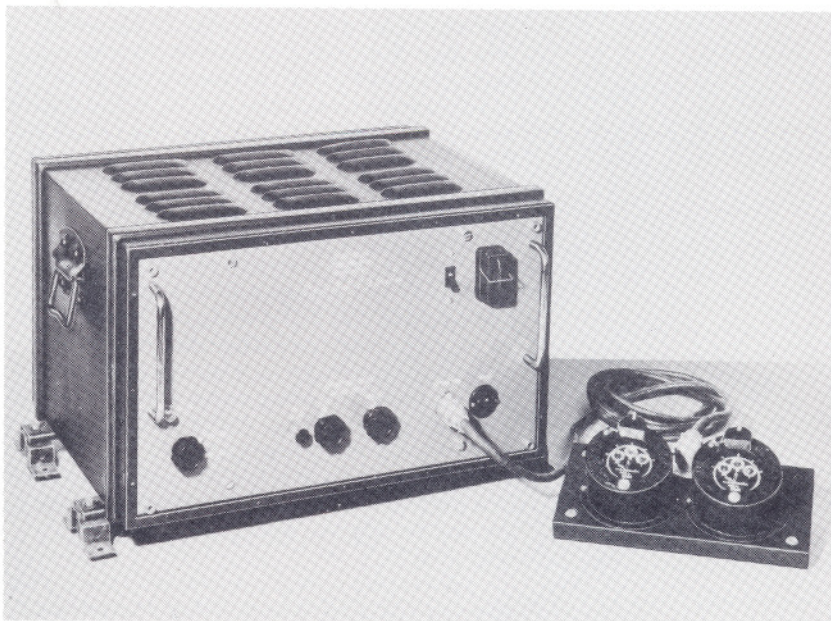
The Army had to be put ashore within 200 yards of a point on the beach opposite a coastal gun battery which could easily sink our little party. I now felt far more confident that we could lead the landing craft to a pinpoint for the run ashore, where they wanted, at the time they wanted, and clear the way for the cruisers astern of us to give them the first covering fire.

Another 10 days was spent at Harwich with two night sweeps just to keep us all in good shape. During daylight hours we were getting everybody fitted and stored for the great day. It was a restful period, visiting the other ships in our flotilla, walks ashore, sailing the ship's dinghy, and trying not to speculate on the job ahead. My captain was feeling the strain probably more than any of us. I could see him as I came down the ladder from the charthouse. He would be sitting with his back half turned to the open door of his cabin, smoking his pipe, chewing dry biscuits, or just pulling at the whiskers he grew high up on his cheekbone.

On the 24th May the tension was broken, and we sailed from Harwich with what we thought was rather a lot of unnecessary flag wagging. The Admiral from the base came and inspected the crew and then decided to come with us as far as the Cork Light Vessel. We were carrying the Flag Officer's broad pennant and were piped by every ship as we proceeded down harbour. When he went over the side to return ashore in his barge his last words were 'Good luck! You have no idea what tremendous reserves we have for this operation'. Robbie one of my shipmates who was to help me with the plotting, turned to me and in his broadest Lancashire said 'Ee-lad, you'd think we were expected to form a solid bridge of wrecks right across the Channel for the bloody Army to walk over'.

Early next morning off the Nab Tower I had the first chance of trying out the new Decca outfit. The big blue enamelled case had been screwed to the bench bunk, which was my normal resting place during passage. With total disregard for this canister of 'Egg boilers and whizzer things' I sat on top with the recording dials on the chart table in front of me. I felt it was not quite respectful to treat the result of so many years of scientific work in this way, but no harm was done, and my dial pointers clocked round steadily as we passed through the crowded shipping in the Solent and

*Below: The 'Blue Gasmeter Job', otherwise Admiralty Outfit QM, the Decca Navigator equipment used in the D-Day operations.*





dropped anchor at the extreme westerly berth by Hurst Point.

Then came the longest wait I have ever had to endure. I felt like an overtrained boxer, flat, tired, and frustrated. We swung round our 'hook' within sight of the shore, the joys and relaxations of which were not for us. Two air-raid warnings and a little gunfire did not affect our end of the Isle of Wight. The Solent was full of every type of ship with tanks and soldiers embarked. The first lieutenant busied the hands with painting ship, as he said there was no sense in going to a party with dirty pants.

At long last the signal came for the captain to open his sealed orders. He called me to his cabin and presented me with a foolscap book about an inch thick and a wallet full of alterations and corrections. These no doubt the result of the many exercises and conferences we had attended together since the first operational orders had been printed. It took me three days to get on top of these papers and sort the sheaf of signals that had arrived during our few days at anchor. It was an amazing document, with details of every movement of shipping and the build up of invasion strength. The whole project of the Mulberry Harbour, the weight of bombardment, the beach clearing devices, the smoke screen plans, the alternatives, and second and third lines of defence. I could picture it all, and we were to have a seat in the front row of the stalls whilst this epic unfolded.

Even then I was not allowed to have the final envelope which showed the exact spot and the courses we were to take to reach the centre of Gold Beach, the code name for the British assault area.

On Saturday, 3rd June the captain handed me these instructions and spent a long time in the charthouse with me, whilst I laid off every course and checked and re-checked all the positions.

We were to be right in the middle of the Baie de la Siene sweeping in front of the first assault craft, clearing an area for *H.M.S. Belfast* and *H.M.S. Sirius* who were to give first covering fire. Our last marker buoy was to be the terminal point of force 'G' under the command of Admiral Sir Philip Vian. The first wave would be going in at 0720 which was the calculated H-hour of D-Day. There were only a few days in June when the phases of the moon made tidal conditions suitable for successful landings. We needed the lowest low water of a spring tide so that the maximum number of beach obstacles would be visible, as the small vessels ran into the beach. The long period to the highest high water that these tides would give, so that the larger vessels had all the possible time to get off the beach after disgorging their precious freights.

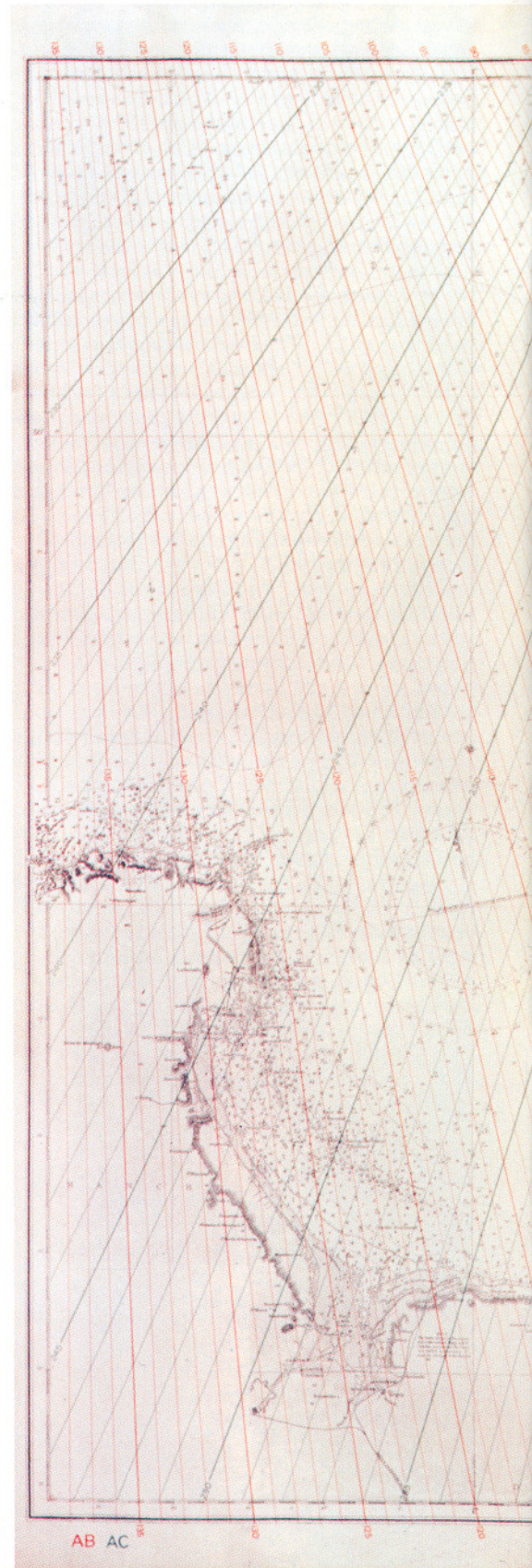
We expected to be four miles off Pointe de Ver some four hours before the first touch down. We felt sure that in the cold grey light of dawn we should make an excellent target for those heavy gun emplacements before the fine array of battleships following us could get in position and open fire. Robbie said if he got tipped in the drink he was not going to accept a lift from anything going south. He'd only be a survivor in a Portsmouth bound ship. Providing we got across, the beaches were going to be a bit crowded.

At last we were going to start. Then a gale blew up and the whole operation was put back

24 hours. That gale must have saved our ships many casualties. The enemy did not expect us to launch an attack in rough weather, and was not keeping continuous watch on his shore based radar. Cloud cover hid our first movements in daylight and surprise was complete the following morning.

On 5th June at 1100 we weighed anchor and at last the tension was relieved. As I looked astern beyond the line of our own unit the solid mass of shipping seemed to stir like some great monster. There was to be no more slinking

*Opposite: Reproduction of one of the first Decca Lattice charts.*



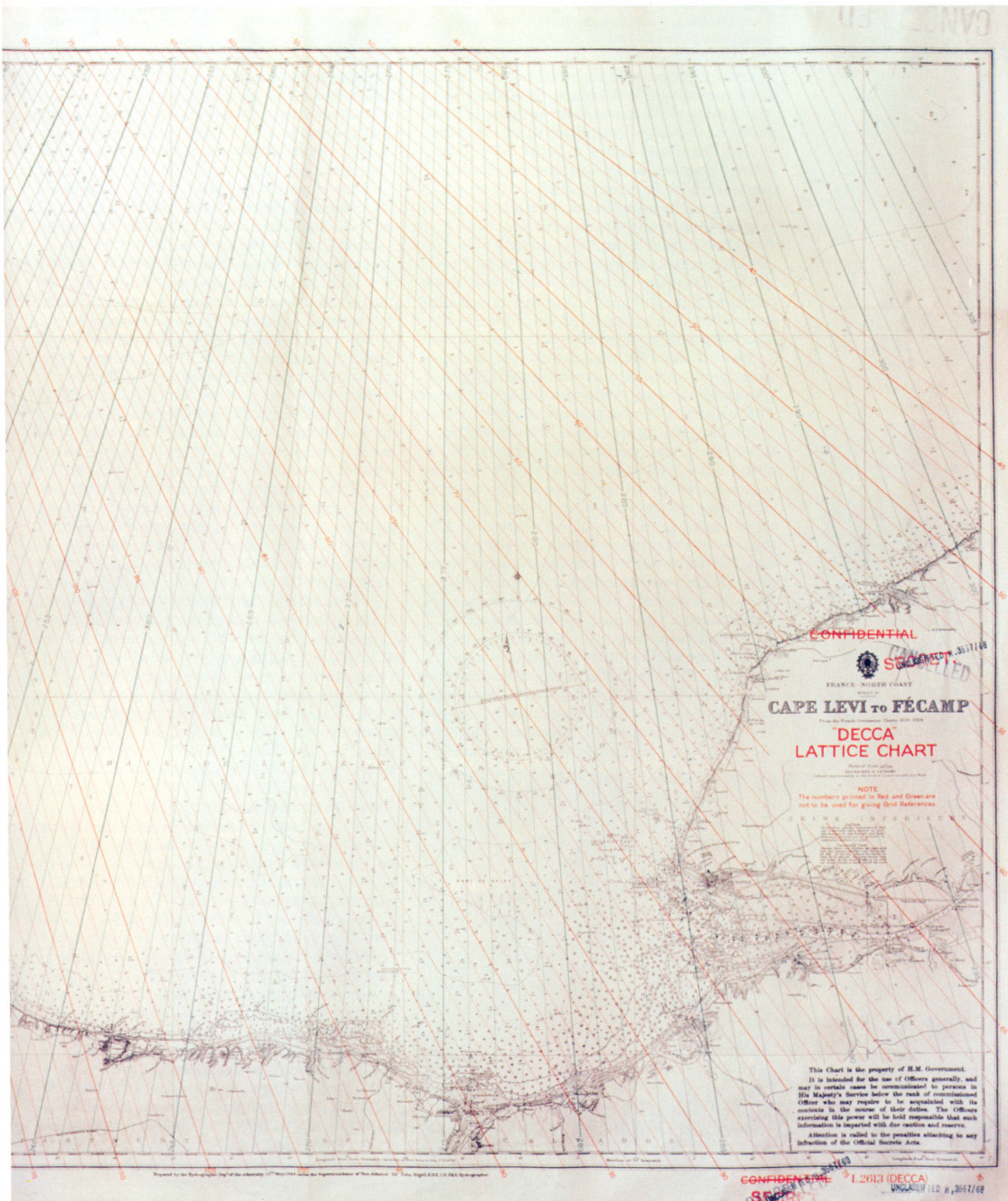


along the swept Channel under the cliffs of the south coast. We were to head boldly right across the widest stretch of sea in company with 8000 ships to breach the wall of defence and assure final victory.

The captain spoke to the ship's company through the loud speaker system, and after reading a message from General Eisenhower told them that there was more danger of being savaged by the crowd of ships on our side anxious to get ashore than from the unsuspecting enemy waiting behind his

defences.

The sea was still a bit lumpy as we turned east at the Needles to our first long course, and I went up on the compass platform to get a good land fix and check the position with the old tried and trusted methods of compass and sextant angle. The ships astern, had weighed a little too soon, anxious to have those few minutes in hand against some unforeseen eventuality. They were already over-running our tail. We were being jostled by our own side. Everything had to depend on accurate navigation and





timing. The small craft were having an uncomfortable time with the sea rough enough to send spray whipping the whole length of their low freeboard. These flat bottomed square bowed tank landing craft took quite a lot of handling in calm seas let alone the tide and wind they were now facing. I had a great admiration for the captains and crew in all landing craft, most of them young, and many of them not very experienced reserve officers. If our row of dan buoys was straight and marked a clear safe channel it would make life a little easier for them the next morning.

The columns of ships were converging at a point south of the Isle of Wight, a sort of Piccadilly Circus which everyone must steam around if they were ahead of time until it was the exact second to set course for France. After my last visual fix I went down to the charthouse to check with Robbie that our machines were giving the same answer. All was well, and a silence seemed to enclose the ship. The captain's secretary asked if he should start plotting in the wheelhouse where he was responsible for the mechanical plot worked from the electric log and the gyro compass. 'Yes, please, Scratch, and get a radar check of your distance from St. Catherine's Point before you start'. Scratch did not look quite as seasick as usual, but was well muffled up with lifebelt, scarf and duffle coat. Jimmy the One was next to visit us. Should he stream the taut wire measuring gear? No, we would let him have plenty of warning. Everyone seemed a bit over anxious, a little self conscious about the part we had to play in the operation. Outside in the wheelhouse the quartermasters changed watch. The relief called up to the officer of the watch on the compass platform, the course he was steering, the speed from the engine room revolution counter, and his own name. So far everything was going like an exercise.

We arrived at our first position exactly on time and turned south. I asked the bridge to pass the word back to the sweeping deck 'Stream taut wire'. Soon the recorder on the bulkhead in front of me was clicking away merrily measuring our slow advance towards the coast of France. The Decca plot and Robbie's scanner all agreed perfectly. With the tide on our beam I soon found that we edged to the east. I reported this to the captain up the bridge voice pipe and heard him give orders for the whole

flotilla to alter course to the westward together, so that we moved over enough to start the sweep at the point planned.

Now it was time to drop the first lighted buoy. I gave the 'stand-by' and then 'Let go'. Way back astern of us it marks the entrance of our channel, and the bridge reports that it is sitting up straight and flashing the right colour and sequence.

The captain came down the ladder to have a quick look at the plot. The tide was much stronger than any of us anticipated. Accurate information of the speed and direction was a little sparse. I was now relying entirely on the Decca dials to show the immediate drift out of line. The captain was a bit puzzled. Was I sure the 'Gasmeter' was giving the right information? We checked back with all the other available fixes. It was working perfectly. Back he went up the ladder. I had to call yet another alteration to the westward to keep our line straight at this very slow sweeping speed. I continued to plot. Remarks drifted down the voice pipe telling me that all was going well with the rest of the flotilla. Soon we should start cutting the first mines. One of the M.L.s ahead, protecting our bow pulled out of line. It was bad weather for his very light gear. Maybe he parted his sweep or cut a mine set to stop us at the edge of the main field. It was getting very hot in the charthouse. The wind was still fresh and the movement of the ship much more than we would choose for good sweeping. Scratch went hurriedly out of the wheelhouse, and I heard him being sick over the wing of the flag deck. The familiar noise of a distant exploding mine came once... twice. Someone had put up a couple. That was two ships saved.

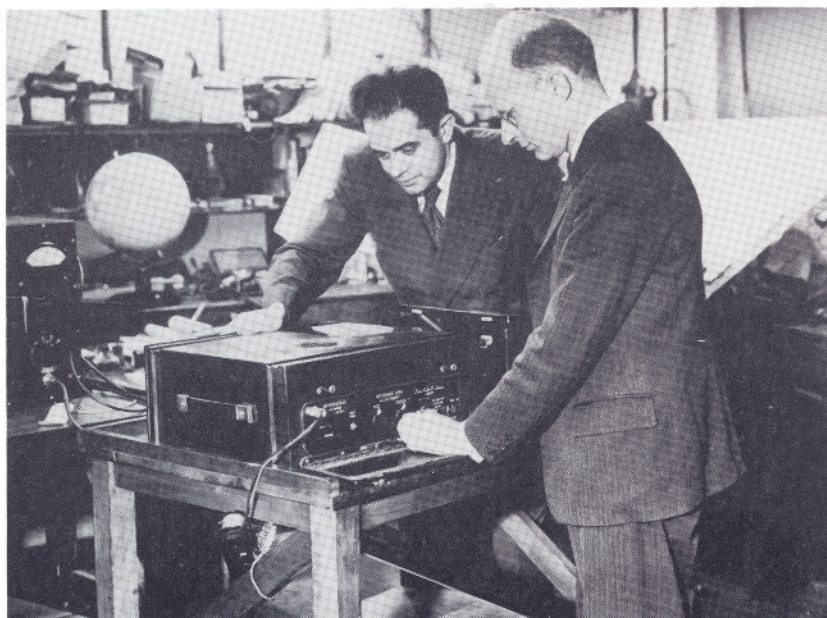
Spud Murphy my steward came in with a broad grin, and held a cup of cocoa in each hand. I told him to go away and bring two glasses of orange squash with some ice in it, and some sandwiches too. It had been a long time since Robbie and I had eaten.

The captain came to the voice pipe on the bridge. I could hear him crunching a dry biscuit. He sounded a bit tense. Once again we answer the question of time, tide, the course being steered and speed made good. I try to reassure him that all our fixes and plotting agree. I gave a new course five degrees less to starboard. The tide was slackening. We reduce speed by half a knot. Still there were no close bangs, no sound of anything we might have swept. Whoof!! Rumph!! That was a bit nearer. Could be two ships astern. Silence on the bridge. 'All ships sweeping and still in station' this from the chief yeoman of signals. Funny? I had expected trouble long before this. We were all still afloat and undamaged. Faintly there came three or four more distant explosions. Then reporting down the voice pipe the O.O.W. said 'Ship astern has pulled out of line and signalled - Sweep parted'. Well I suppose we had swept a few but if they were 'floaters' we could see nothing. I called up to the bridge that we were ahead of schedule.

'Look here, Pilot, if I reduce speed any more we shan't be sweeping at all', the captain grumbled down the voice pipe.

The tide was now quite slack. We were steering the true course to take us to Gold Beach. My eyes were sore and tired. Spud came in with more food and drink. 'Are we nearly there, Sir?' 'Not much further to go now. What's happening outside?' 'Nothing at all Sir. I reckon the enemy have all gone on leave.' I checked the

*Below: The inventors of the Decca Navigator System - the late W.J. O'Brien and H.F. Schwarz.*





position with Robbie's plot and had just read off the distance on the taut wire, when the repeater started to turn at a furious speed. Our 2nd S.O. ship immediately astern must have caught our wire in his sweep as he pulled out of line, and was towing it madly westward. A few seconds of wild clatter, then silence. The measuring gear had parted.

'Well that's one less dial to watch', said Robbie.

The slack tide meant that we must now change sweep wires to the opposite quarter. The easterly set would soon begin to run so all ships of the flotilla had to turn together and solemnly steam back down the lane we had just searched.

We heard some general slanging going on up on the compass platform. Some argument about a lighted dan. Then the dial needles of my Decca stopped and slowly started moving in the opposite direction. Uncanny . . . it seemed as if we had some overhead cable which not only showed us the direction but also our speed through the water. Certainly the backroom boys had done us proud. Again we turned south, and soon the starboard sweep had been veered. A signal came down the line that our tailend trawler, waiting to complete the dan laying, was mixing it with the first of the landing craft. The captain came down to look at the plot.

'We seem too damn close Pilot, I can see the French coast already. Which of your many calculations puts us nearest to Pointe de Ver?'

Together we checked the last fixes showing clearly how we had reversed in a tight circle, back tracked, turned about again and continued from the other side without missing a yard of unswept water. Just like a practice run in broad daylight.

So quiet now on the bridge, we can hear someone by the voice pipe sharpen a pencil. Slowly we creep forward to the end of our lane. It's time to lay the last dan buoy. Time now to turn 90° to port and search the area for the bombardment ships. A minute seems an hour. Today is D-Day. It is 0325 on 6th June 1944. Still silence. The sea must be kicking up the surf on those hard sands just four miles away. Pity the soldiers. Hope they are not seasick. The whole flotilla must be facing east now. Surely the broad silhouette of our hulls must be visible to those heavy guns ashore. Still not a shot is fired.

For 15 hours I had been in the charthouse plotting. Robbie made a final fix. Scratch came in with the track he had plotted on the wheelhouse table. I checked once more with my dials. We had found the right beach, our troops would go ashore at the right spot. We turned once more now sweeping westward. I went up to the compass platform for the first time since we left the English coast. As I looked south a huge spurt of orange flame shot skywards. Our bombers had started the party ashore.

A faint change showed in the light of the eastern sky. The drone of aircraft overhead throbbed in a clearing of the purple grey clouds. Two huge grey shapes passed close along our port side as we altered course to the north. *H.M.S. Belfast* and *H.M.S. Sirius* glide by unmolested and undamaged. Soon they opened fire and these were the first guns we heard on that fateful morning. Slowly the curtain of a June day was lifting. In every direction as far as the horizon, ships moved into the Normandy beaches, above the endless streams of aircraft proclaimed our control of the air. It did not matter what happened now. This moment in

time was mine, never to be lost. A feeling that victory was certain, that nothing could stop that great flood of men and machines that filled the bay and moved undenied in ever increasing waves from hour to hour.

Not one ship in our little party of 10 was lost. The skill of all the services had cheated the enemy. The weary days of continued effort still lay ahead, but we all felt jubilant, as the solid line of shipping passed down our channel. By mid-day we must widen this so that the bigger sea marking buoys could be laid by the Trinity House vessel. Throughout the day we ploughed on. The rumble of guns grew to a continuous roar. We prayed that the soldiers' job was going as smoothly as ours.

At dusk we anchored in company with destroyers and the other flotillas of sweepers, to form a screen six miles from the beach right across the bay from Pointe Barfleur to the Caen Canal.

For the first time in 36 hours I went below to my cabin and fell asleep with a fully inflated lifebelt and a pair of binoculars round my neck.

There is no doubt that the success of that first 36 hours was just as much a victory for those ashore who spent an anxious night after tireless months of planning, as for those of us who crossed the water in the ships. Before we left the Solent I had plotted with all known data the courses I expected to give to my captain every half hour of the passage. The Decca Navigator showed instantly when correction was required. These corrections for tidal set could not have been made without the aid of constant shore observed fixes. I was confident we drew a straight line across the sea bed that night. The original fixes which I inked in served to check a final searching sweep some time later, and we flogged up and down that line for two weary months. We had to fight the biggest mining offensive ever staged at any time in any waters, only to be put out of action 10th August by a circling torpedo right at the end of our own D-Day channel.

The Sailors, Soldiers, and Airmen who lived through that 'Longest day' owed much to the Long-haired Scientists, the Shore side Boffins, the Backroom Boys who spent many days with us before the Normandy landings. We had a great respect for them. They certainly assured us success in the opening phase. I salute them all.

*Below: QM1 at work.*





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