

## U.K. Brass-hats eyeball 647

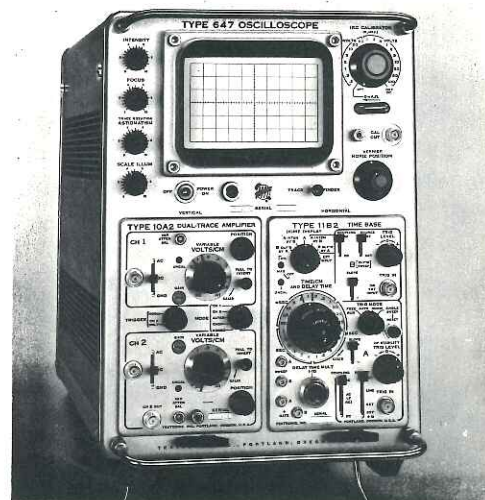
Some months ago, the British Services became interested in the Tektronix Type 647 Oscilloscope. This rugged, lightweight transistorised instrument, along with its Plug-in Units Type 10A2 and 11B2 appeared to fill a long-awaited requirement.

Negotiations were entered into and the instruments were subjected to a series of exhaustive tests at military establishments and an environmental test centre. We are pleased to say the 647 and Plug-ins came through with flying colours and only a few modifications, including the addition of handles to the frontpanel were necessary before complete acceptance was obtained.

Sample instruments, were quickly produced and modified in Beaverton and John Thompson (Hero of That plane crash) made a trip to Tektronix Inc. to discuss technical details. The instrument required a field case and this has been supplied by an English manufacture. The complete set is known as Oscilloscope set CT536 and carried the joint services ref no. 6625-99-952-2040. The Tektronix Mod. is 165K. It was displayed at the I.E.A. Exhibition in London in May.

Both the Royal Air Force and Army are concerned in the contracts which at the time of writing were awaiting final Government approval. The Military Personnel were very impressed by our response to their needs as were the Ministry Officials following a tour of La Villiaze and our training and repair centre in Quay House.

A great deal of credit is due to Tektronix UK staff and Special Products and Manufacturing in Beaverton for the speedy way they responded to the initial enquiries and the quantity of the instruments made rapidly available.



## Editorial

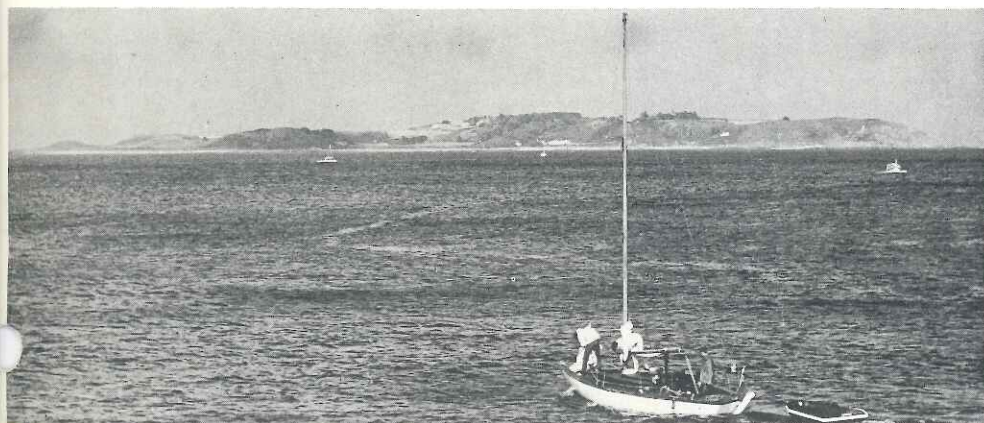
Summer is always a busy time for sport in Guernsey and quite a variety of the events enjoy sponsorship and participation by the members of The Social and Sports Club. The social scene has never been lacking and there have been several events such as car treasure hunts etc. which were enjoyed by all the participants. We hear that the sing songs at Delancey Hotel have been extremely popular and one of our committee members has been a-roving with his tape recorder, to very good effect and the possible acute embarrassment of others after the event.

It was a pity that the sea-mist tended to dampen everyone's spirits during the once postponed Tek -Picnic on Herm, but I expect the majority of us were grateful for the lack of blistering backs the night after.

With this issue we celebrate the first birthday of 'Tektomics' and I wish to thank all those who have assisted in the production during the past year. I am assured by all who read it that it is appreciated despite the very poor response from our survey, carried out with the last issue - only 6 replies from 350 circulated.

We welcome back John Mann to the committee which is now set up as follows: Roy Perry Editor, Ken Hart - News, John Mann and Bill Downton - Features, Peter Bott, Sports (and Social) and Don Brook as photographic consultant.

We hope we will be able to find items of interest during the years to come for all our readers



This is how Herm looks on a clear day!

## Patent infringement suits explained

A short while ago, company vice president Bill Webber explained the present status of patent infringement claims filed against the U.S. Government by Tektronix

He said that complete oscilloscopes are not patentable but only those portions of circuitry and components that may perform a specific task (such as unblanking sweep circuits, amplifiers, and probes) and are true inventions.

At present we have 33 U.S. patents and 61 more applications in process. We have also patents in several foreign countries. The current litigation dates back to 1958. At this time the US. Signal

Corps took bids for a quantity of type 535 oscilloscopes. They gave the contract to Hickok Electrical Instrument Company. As soon as a contract was issued, Bill wrote to Hickok saying our type 535 was covered by certain patents and that we expected them to perform on their contract without infringing on those patents. They asked for a license, which request was not granted.

Our letter to Hickok was forwarded by them to the Signal and was thus considered to be the start of an administrative claim.

Continued on PAGE 2.....

# PRODUCTION ENGINEERING

This concluding article in our series describing the function of the Component Manufacturing areas deals with 'Shop' which comprises the areas described below. They were developed with the need to produce locally finished components from semi-finished parts imported from Beaverton in order to increase the Commonwealth preference content of Guernsey-made Instruments.

## production shop

This area is engaged in the assembly of knobs, the manufacture of transformer terminal boards, delay line plates, attenuator panels, etc. The manufacture of chassis, brackets & shields from sheet aluminium is being developed to a limited extent and several parts are in production.

## metal finishing

All our aluminium parts are etched and lacquered in order to give a satin finish to the metal.



Model Shop

This department operates an etch line consisting of a degreaser, caustic etch tank, a water spray, an acid bath & a hot water rinse. All etched parts are given a protective coat of clear lacquer. Parts to be painted are finished in the familiar Tek. Blue, using conventional spray-gun methods, and are stoved to give a hard and durable surface.



Production Shop



Metal Finishing

## model shop

Provides a service function to other manufacturing areas, generally supplying jigs and tools. Machines have been designed and built here, for example, the Wire Stretching and Cutting machine. The largest job attempted was the hybrid printing press but smaller machines, such as a capacitor and resistor winding machines have been built, calling for a high order of accuracy.

## PATENTS .... continued

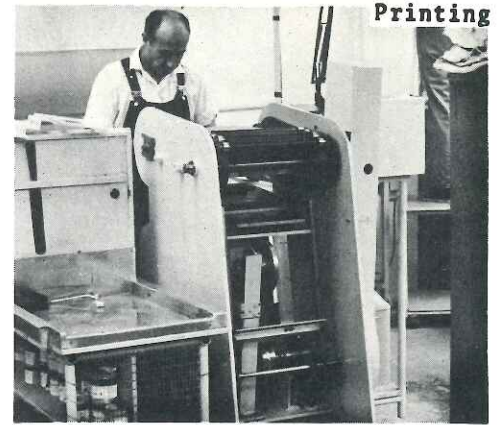
During 1959 the Air Force issued requests for bids on a quantity of 545's. Again Hicock submitted an instrument, Lavoie did the same at a later date, both we felt infringing our patents. The Air Force considered our protests in this case as an addition to the administrative claim already in process with the signal corps.

In 1961 we retained patent attorney Bob Conrad, of the Washington D.C. Law Firm, Watson, Cole Grindle and Watson and, on March 3, 1961 we filed our claim in the U.S. court of claims.

We had a pre-trial conference in December 1962; discovery depositions were taken in Portland in February 1963; on May 22, 1964 we attended formal pre-trial

conference called by the Commissioner of the Court of Claims. In July and August this year we took depositions or sworn statements from employees of the Defendants. (The USA. as Defendant & Hicock, Lavoie & Jetronics as third party Defendants - parties who have a financial interest in the outcome of the suit). This is to obtain information in support of Tektronix claims of infringement. Similar depositions have been taken from our employees. The trial is scheduled to start on November 4, 1964. The US Government is represented by the Department of Justice and Hicock, Lavoie and Jetronics have also retained attorneys.

U.S. Law states that, where government contracts are involved suits must be heard by the court of claims and we cannot sue the infringers directly. compensation



Printing

## printing

Parts that require marking are printed or silk-screened in this area. Rubber stereotypes and silk-screens are manufactured internally for the section's use. Three machines are used, a converted Falcon Platen press, hybrid blocking press, designed built in the Model Shop & a bench type 'Rejafix'. Where possible, printing methods are used, silk screening being kept to a minimum.

## personalities

Bill Nickolls started with Tektronix in November 1958, being the second person to be employed by Tektronix Gnsy Ltd. and is now the Section Leader of Production Shop.

Don Brook is Section Leader of Metal Finishing and he joined Tektronix in June 1961.

Jim Cutler started with the Company in August 1959 and is now Section Leader of the Model Shop.

Alf Richard commenced with Tektronix in June 1959, he worked in Facilities until two years ago when he transferred to Production. He now runs the Print Shop.

Richard Gipp started with Tektronix in June 1961 to set up and run the printing area. He was made Shop Supervisor in July 1962.

may only be claimed for the previous six years. Unlike a commercial situation the patent owner cannot ask the infringer to stop because this may affect important government purchasing.

One year ago the U.S. Dept. of justice filed a counter claim against Tektronix for infringement of Govt. owned patents. We will attempt to have this disallowed on a point of law, earlier design work in England before and during World War II may help this.

We have been concerned in claims for and against our circuits in the past some claims were dropped, others were upheld and we now pay royalties on some European sales to companies such as Sperry Gyroscope, E.M.I, and R.C.A, as well as having royalties paid to us by Hewlett-Packard, Walden Electronics and Keithley Instruments.

# .. 'bout fishin'

A stirring account of a  
Norm Gardner fishing trip...

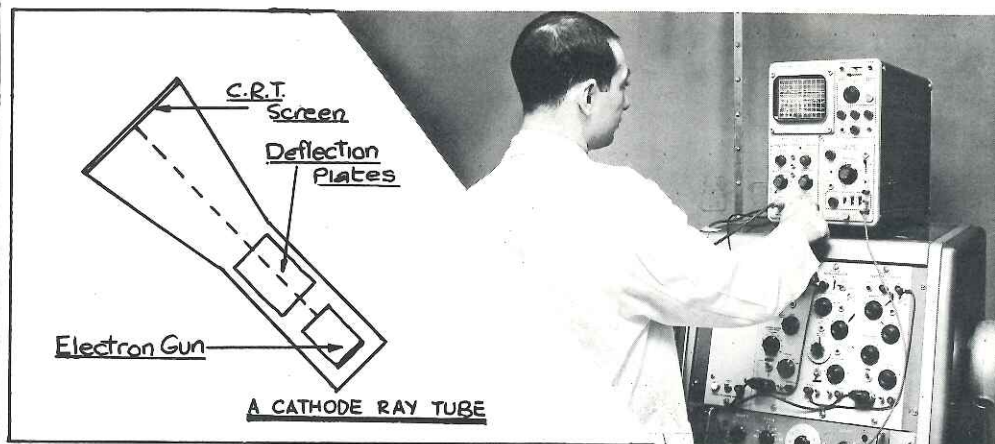
Having never seen a real live Salmon, the invitation to join Red Vandehey, who has the reputation of being the best fisherman in Beaverton, on an evenings sport was most welcome. The need for a license and a card to register fish as they are caught seemed unusual after Guernseys' free for all. The fact that one can only catch two Salmon or Steel-Headed Trout a day seemed iniquitous.. The fact that fishermen don't ever fiddle was a trifle dissappointing.

Preliminaries duly completed and impatience building up we had soon left Portland behind & were driving up the Columbia River. The beauty of this country can never be fully appreciated from picture postcards. Trees covering the Cascade Mountains come right down to the river on both the Washington & Oregon sides, above which, snow covered peaks thrust their heads out. The river is wide & dotted with islands. A stop for canned beer, then on to Bonneville Dam & fish hatchery.

Soon we were casting our line into the swirling water below the dam & eventually, a first strike. The nylon payed out despite the tension screw being almost closed. My first thought was to give Red my pole and watch all the fun as I drank his beer. His instruction however, was to 'run with the fish' so I ran! The river bank is strewn with large boulders that are only more conducive to crawling over than running over. After a gallop down a hundred yards of bank I became indifferent as to whether the beast dragged me in or I pulled him out. Other Rod-men on the bank reeled their lines in fast as I staggered past and made some encouraging remarks like "Take it easy- have fun". Eventually the fish was gaffed & beached by Red, proving to weigh thirteen pounds, which apperently was small but it turned out to be a male Chenook, which was good.

Salmon fishing in those sort of surroundings was certainly Al and fishing with fifteen pounds breaking strain line for fighting fish that go thirty, forty & fifty odd pounds is certainly spert.

My punch card ended up with three holes in the Salmon column; the other two holes would make an even fishier story.



## The How, Why and When of Oscilloscopes

### No.1. How...

An oscilloscope consists of four basic units: 1) A cathode ray tube (CRT), 2) A sweep circuit, 3) A vertical amplifier, 4) The power supply. The most important of these units is the CRT and the other three units provide conditions required for correct operation of the CRT.

The CRT can be likened to an electric torch which produces a very thin beam of light. A mechanical device which is able to move the torch in any direction, and a screen on which the light falls. If the torch were moved from side to side, you would see a small dot of light moving horizontally across the screen, and if the movement was very fast indeed the spot would appear as a horizontal straight line across the screen. If the torch was moved up and down vertically at the same time as side to side, the horizontal line would appear wavy.

In the CRT itself, the spot of light is produced by a beam of electrons striking a glass screen which has been coated with phosphor. This beam of electrons is produced by the electron gun. The metal part at the back of the CRT The Electron gun and screen are enclosed in a glass envelope from which the air has been pumped.

The electron beam is moved up and down by the vertical deflection plates which are connected to the vertical amplifier, also from side to side by the horizontal deflection plates which are connected to the sweep circuit.

The sweep circuit produces a voltage which moves the spot to the right from the left of the

screen at several set speeds controlled by the time/cm switch.

The switch tells you the number of seconds the spot takes to move one centimetre. The sweep circuit also pulls the spot back to the left hand side of the screen but at a much faster speed; this is known as flyback. It is undesirable that the spot should be seen during flyback as it moves across the screen, so the electron beam in the CRT is automatically switched off during this time. This is why, if you watch a slow moving spot on the CRT the spot appears to move one way only.

The signals that an oscilloscope is used for looking at, are often quite small, and the voltages required at the vertical deflection plates to move the spot up and down are fairly large. An amplifier may be used to increase the input signal; this amplifier being known as the vertical amplifier. The plug-in units are the first stage of the amplifier and can adapt the main oscilloscope to many different uses. For example, the E unit may be used to measure very small signals; the D unit to tell the difference between two signals; and the CA unit which, by special switching arrangements, allows you to look at two different signals at the same time. The main control on the vertical amplifier is the attenuator switch which tells you how many volts are required to move the spot one centimetre vertically on the CRT screen.

The power supply, including the F&I chassis and the HV unit, provides the correct voltages and currents for the oscilloscope. This is done by converting the AC mains to DC voltages for the remaining circuits of the 'scope.



# TEKS INVADE HERM . . .

The picnic, which once again took place in Herm, was originally scheduled for Sunday 12th July. Much preparatory work had been done by many hardworking members of the picnic committee only to find out at 5.00 pm on Saturday a force seven gale plus a deluge of rain was expected overnight, hence it was decided that another day might be a little better.

Once again, on Saturday 25th July the party of rogues and vagabonds assembled at the harbour together with all the necessary junk required for such an outing. & set sail for Herm about 6.0p.m. Fortunately, no one was lost on the way and by 9.30 that evening

everything was ready for the 'big day! Light refreshments were then served in the Islands' only Pub and the party arrived back in Guernsey at Midnight - or thereabouts.

At 8-30am on Sunday, the invasion began. About five hundred people managed to get across, and as far as we know, about the same number came back, with the exception of three stalwart youths who volunteered to clear up the mess on the Monday morning.

Throughout the day there was amusement of some kind to keep everybody occupied. For the young ones, there was a bun-eating competition (much to mums' disgust), coconut shies, bursting the balloon contest, a treasure hunt, and a scavenger hunt. The older members could take part in an egg throwing contest or an underwater spear-fishing competition, which was won by Jon Dauncey. He caught a 12lb conger and two rockfish at 3½lb & 3lb., second was Dave Roland and third Bernie Savage. The angling competition was won by Mr. Charles Wenman (A Guest) with a Mullet and a rockfish.

The big attraction of the day was the Miss Tek competition, here we must congratulate all the entrants, But in particular Miss Shirley Torode, who was placed first, and Miss Angela Jean and Miss Nadia Renouf who were second and third. Major Wood and his fellow judges certainly had a hard task in deciding who of these pretty young damsels should win.

Unfortunately for those who wanted to sunbathe, there was a mist throughout most of the day, but as always happens on these occasions, the sun shone when it was time to return home. By seven o'clock Herm was once more back to normal, and many tired children and frustrated parents made their way home.

# . . . AGAIN



Top. Miss Tek and runners-up.

Above. BBC coverage by Reuben Martel.

Right. Fish holding Bernie Savage.



# NEWSREEL

Only sixteen cars turned up for the treasure & scavenger hunt held on Friday 24th July. This, in some ways was very disappointing, especially for those folks who spent so much time organising this event. However, many more turned up at the rendezvous and a most enjoyable sing-song rounded off the evening at the Delancey Hotel.

Winners, with points scored out of 150 were:-  
 1st. Peter Ferris, 135 pts.  
 2nd. Ben Gregg, 120 pts.  
 3rd. Rex Martel and Barry Le Feuvre tied with 113pts.  
 A fourth raffle prize also went to Peter Ferris.

At the end of July we had yet two more visitors. Norm Zimmer and Tom Taylor, who between them were responsible for the design of the new La Villiaze Plant. They were here to see their baby now it is one year old.

Eb Von Clemm, Manager of Tektronix Canada Ltd. paid a short visit to Guernsey following his recent European trip. Eb started work with Tektronix Inc. in late 1955 and was District Manager of the Washington D.C. Field Office before moving to Canada in January this year.

Anyone who thinks they can spare a pint or so of their blood should go along and see the St. John's Ambulance Brigade or their Doctor. We're told that Guernsey is in urgent need of blood donors so how about giving away some of those excess red corpuscles there really is nothing to it!

Pete Wardle of Quay House has just got his name in the latest edition of Field Engineering News (and now Tektopics too). He has designed a gadget which when used with a 575 makes testing any type of semi-conductor diode much easier.

Can anyone think of a use for a room without a door? Field Engineer Rodney Reed was faced by this problem when he returned to Guernsey from a field trip, and went to inspect his partly built bungalow. Strangely enough there was a room without a hole for the door, moreover the 'little room' was just that, about tea-chest size in fact. We're happy to say the necessary alterations have since been made.

## 5 year teks

The latest five year Tek's are Alf Bichard who joined 17/6/59 in Building Maintenance and transferred to Printing September '62 Joyce Froome who joined Personnel 6/7/59 and then Tektronix Ltd. May 1963: A five year Tek all but one day was Nancy Snell who left to take up the far more important post of Mother to her and Ron's adopted son.

## High Jinks

The sight of several people balancing drinks on the top of their heads and performing acrobatics has surprised many people strolling along Delancey Lane on recent Friday evenings.

They have not stumbled upon the start of a new 'Yogi' cult in the Island, just part of an evening with the Materials Boys and Girls at the Delancey Park Hotel.

Recent Fridays have seen our singing "Mats", under the able direction of Charlie Besnard, finding any excuse for holding a sing song at the Delancey. All the old favourites, plus a few previously unperformed in public, have been heard drifting over the Park.

The drink-balancing act?, that is an endurance test which goes under the title of "Do you know the Muffin Man?" The honours for this invariably seem to end in the same camp.

We wonder why?

## small ads and statistics

### For Sale

125 LAMBRETTA, 1963 Model, 2,800 miles, HP terms can be arranged. £75 ono. Apply Roy Nicolle, Building Svcs.  
 ROLLEIFLEX 3.5E, Excellent condition, Filter and Lens Hood. £55. HP. terms available. Contact Don Brook, Metal Finishing, Victoria Ave.  
 MORRIS MINOR 1954 £65. Apply to Len Quesnel, Facilities.  
 ONE 17" TV, £7.15., One 14" TV, £5.10, Both recently overhauled, Contact Fred Rose, E Block, Albany.  
 12x40 BINOCULARS, Centre focus, plus individual right eye-piece adjust, £5 Roy Perry, E Block, Albany.  
 CAPRI 85cc Scooter, 1470 miles on the clock, £60 o.n.o. Contact Reception, La Villiaze.

**WANTED, URGENTLY BY TEKTOPICS,**  
 Young, able & willing girl to collect statistics and adverts and take minutes at our meetings  
 Apply to any Committee Member  
 See list on Page One.

Thanks to 'Tekweek' & Bill Webber for the Law Suit article, Norm Gardner, Dave Inman and Harry Guilbert for other contributions and the Committee plus Bill Dowinton, Peter Bettell, June Brimage & Valerie Cotsworth for all their help.

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### New staff

Tilly Waller	Tektronix Ltd Cust. Svce
Suzanne Davis	Unit Wiring
Margaret Mead	Unit Wiring
Carol Brehaut	Unit Wiring
Maureen Falla	Unit Wiring
Myra Russell	Mechanical Assembly
Gillian Collins	Manufacturing
Marlene Sweetland	Manufacturing
Sonia Sweetland	Purchasing
Wendy Nicolle	Purchasing
Carol le Page	Personnel.

### Marriages

Sheila Hillion to David King on 24 June at Delancey R.C. Church.  
 Pamela Brown to Brian Bickley on 8 July at St Michelle du Valle  
 Sandra Hill to Roger Gill on 22 August at St Martins Church.

### Births

To Leona (nee King) and Rex Trott, a son Linden, born July 17th, 61b 9ozs.  
 To Richard and Margaret Marriette, a son Paul, born June 28th, 71b 10ozs.  
 To Rodney & Elizabeth Reed, a daughter, Rachel Jane, born Aug. 1st, 81b 5oz.  
 To Den and Barbara Bott, a daughter, Darrell, Born Aug. 31st, 61b 2ozs.

If anyone is interested in joining a Baby-sitting service for Tektronix Mums and Dads will they please contact Peter Ferris, Extension 31, La Villiaze

# le sport.....→

Our Anglers over the last few trips have found a varied catch of fish. These have included Pout, Ballan Wrasse, Red Gurnard, Greater Sand Lounce, Blue Bream, Mackerel, Silver Whiting and Dog Fish.

Currently leading on points is Joe Guerin with a total of 104 points followed closely by Peter Sirett with 101 points and Fred Rose with 89 points.

Recently, while on one of the Tektronix Trips, John Tongs landed a Dog Fish after quite a fight. This tough dog, when gutted, was found to contain in its stomach two large hooks (apart from Johns) with lengths of line attached. Somewhere around these is certain to be 2 mightily annoyed anglers.

Another odd tale is that of Joe Guerin, when angling in Herm recently he'd almost landed a large fish when it took off with Joe's gear & all! A short way up the beach another Tektronix angler successfully landed a 6½lb Dog fish and sure enough Joe's tackle was in its open mouth.

The Social & Sports club have made arrangements for a subsidised trip to Jersey for the weekend of 26th & 27th Sept. A Tektronix football team will be playing the Jersey Sylvans on Sunday Afternoon. Lists have now closed but Al Lambourne may be able to fix you up.



A fully-automatic vending machine has recently been installed at La Villiaze.

On Thursday 28th July, Tek'A' cricket team achieved their best score ever when they trounced the Electrics, their closest rivals, scoring 145 runs for a return of only 55 runs. The effect it had on Electrics confidence is not known - but they lost 2 of their next 3 matches! This meant Tek'A' needed only one point from their last 3 matches to win promotion to Div.1. This they achieved on Aug 12th when restricting Herald to 78 runs in 13 overs. Then Tek replied with 79 runs in 12 overs. Congratulations to the team and skipper Rex Martel on their fine performance this season. We are sure that a more enthusiastic lot would be hard to find.

Although it is difficult to sort out individual performances a word of praise must go to Ron Duncan and Simon Hollyer-Hill who have batted consistently well and proved a very strong combination in opening the batting. Simon has a batting average of over 50 and Ron is only slightly lower. Ron incidentally made the highest score at Delancey park this season when he scored 61 not out, with Simon 57 and Doug Eley 54 close behind. Unfortunately this score was only beaten by 4 runs, otherwise Ron's would have stood to win £5 worth of sporting equipment.

A word also for some players who were not selected for later games. It is to their credit in accepting this without question, realising it was in the interest of the team to select the strongest side every match.

The trios competition proved very successful and entertaining to watchers and players. Notable efforts by John Baker (left to score 40 runs and just failing) and Peter Bott (ran 49 runs by himself to win for his team) made the days. The 'Hill-Billies' looked to be coasting to a win with two innings over 50 but they lost in the Semi-Final to the 'Square-Legs' who were beaten in the final by the 'No-Balls', Dave Inman, Sid Smith and Ron Duncan, well done!

The 1964/65 badminton season will soon be under way and it is hoped that by the time the season starts, courts will be available for us at the newly built hall. Two courts will possibly be hired thus allowing more games for each member at a more reasonable fee. This, of course, depends on the number of players joining the club, as fees are as much as 25/- per Club night. Much more support is needed for this sport, especially now that the improved facilities are available. Anyone interested in joining the club, contact Rob Ozanne for details.

TEKTOPICS is published for and by Tektronics employees in Guernsey.

## Do you know your Island?

:- This time some pictures of St. Sampsons along with a few questions.

Here goes

1. What are "Poulage" "Pesnage" and "Mouillage"?
2. Where is the longest flight of steps in the Island & How many steps?
3. Where is there a stone marking the centre of the Island.
4. Which Memorial on the Island contains the largest block of granite?

ANSWERS? NEXT MONTH WITH LUCK!

