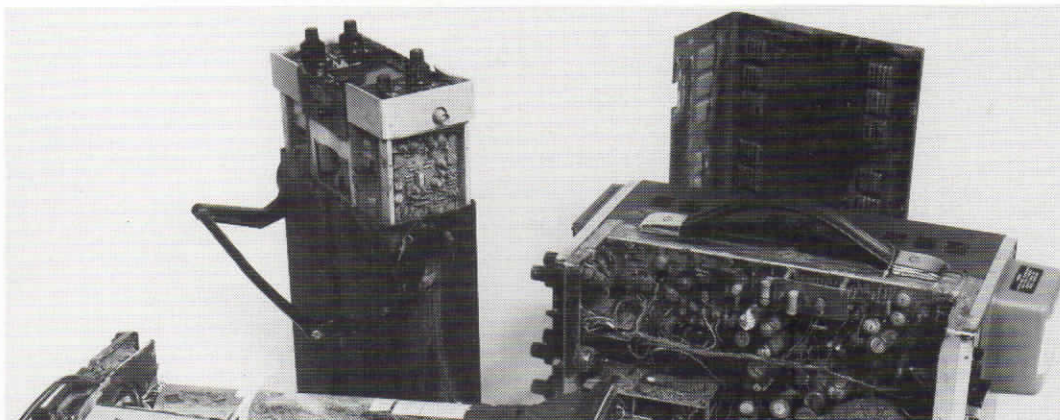


Testing . . . Testing . . . Testing . . .

Environmental Testing, the tough way!

Here are three instruments that have *really* suffered, (from left to right) a Tek T900, and a Telequipment D32 and DM64. They were all stolen from a field engineer's car which had its windscreen shattered by a brick. The instruments were found three months later at the bottom of the Thames by frogmen searching for a missing person.



Telequipment's No. 1 Product

Ever heard of a Telequipment WG/4? or a WG/44? Back in the early 1950s the WG series was Telequipment's first product line, and they were *not* oscilloscopes.

The original WG/4 was a



television pattern generator designed to provide service engineers with a test signal which enabled them to adjust all the pre-set controls in a television receiver. This was particularly useful at the time because BBC transmitters were off the air for much of the working day. Programmes did not usually start until 7 or 7.30 pm and it was therefore difficult to adjust receivers in viewers' homes. This was before ITV was born, and BBC test transmissions were radiated only for an hour each day.

Manufacturers could get around the problem without much difficulty by installing elaborate equipment which was similar to that used by the BBC themselves but, of course, it was expensive and far from portable.

The WG4 provided a signal which was equivalent to a transmitted test card and must therefore have been a very useful piece of equipment in the TV industry.

When ITV transmissions began, the WG/4 was superseded by the WG/44 covering a wider range of

frequencies, but it was basically the same instrument.

The first WG instruments *were* actually built in a garden shed, around 1951! It was located at the rear of a house in Beresford Road, Harringay, London. Despite a fire which all but destroyed the shed, production continued there for two or three years before the eventual re-location to Whetstone and eventually Southgate.

No information is available on the price of the WG/4 but the WG/44 could have been yours for £62. As the sales brochure slogan claimed, it was, **QUICKER, CHEAPER — BETTER.** Sounds familiar doesn't it?



Cover Girl

Sharon Barnes joined Tektronix in January 1978 and currently works in D1000 production. Sharon's hobbies are reading, writing and cookery.

You Done Good TEK UK

"When you managed your inventory better than any other Tektronix manufacturing company during fiscal year 1979" — Ken Knox — Treasurer.

This certificate was presented to Maurice Parker on a recent trip to Beaverton.

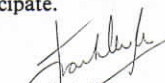


Quality and Reliability Programme

In this issue we are publishing details of Tek UK's Quality and Reliability Campaign, contributed to *Tek Times* by Eddie Curran in his new role as Quality and Reliability Manager. To mark the start of the campaign, John Shafe has received the following letter from Tektronix Vice-President, Frank Doyle, in Guernsey.

To: John Shafe
From: Frank Doyle
Subject: UK Manufacturing

Dear John,
I am glad to hear of your new Quality and Reliability programme and wish you every success with it and hope that all employees will participate.


Frank Doyle
Vice President
European Operations

Recent Visitors to Tek UK

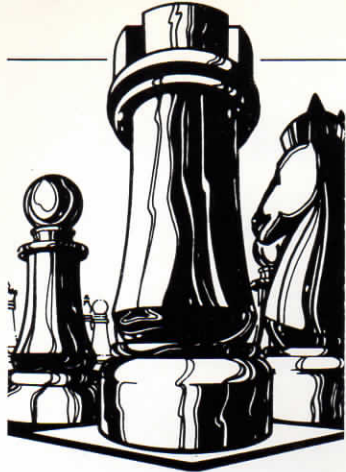


As part of their tour of European Service Centres, Ken Parker (2nd from left) and Stan Kouba of Tektronix Inc. Beaverton, are seen here at Harpenden during their recent visit. Also in the picture are Dave Callendar (left) and Mike Smith (right) of Manchester and Harpenden respectively, with Ed Morrison, centre.

Also here in September (right) were Peter Fulwell, Jenny Blondel and Barry Bisson of Tektronix Ltd in Guernsey, for discussions on the introduction of a computerised nominal ledger system.



Tektronix UK were hosts to the distributors of Telequipment products, Electroplan Ltd on September 6th. Electroplan's managing director David Hall and the company's sales personnel were given a guided tour of the D1000 production area at Hoddesdon, followed by general discussions. David Hall later said that all those from Electroplan were delighted and impressed with the reception they received.



Chess

The origin of chess as we know it, is nearly a thousand years old, and the country where it all started was India.

An old story goes like this: a King at the Indian Court of Balhait asked a wise man to create a game that had to demonstrate human values such as knowledge, prudence and foresight, all at the same time.

It would also oppose the teaching of games in which chance decided the outcome.

The wise man brought a chequered board to the King, not much different from the chessboard of today.

When the King was taught the game, he was very delighted and told the wise man; "Ask any reward you desire, it shall be yours." The wise man said: "Give me a reward in grains of corn upon the board. On the first square, one grain, one the second two, on the third four, and so on until the last square."

The King ordered the corn to be brought forward, but before they reached half the number of squares,

all the corn in India was exhausted.

They found out that the amount of corn required would cover the entire surface of the earth.

It is said, that the King did not know what to admire most: the invention of the game, or the wise man's request. The number clearly would be: 2^{64} , an astronomical figure.

In those days the Indian Army consisted of four separate units: infantry, cavalry, chariots and elephants. At least, that's how Alexander the Great found himself opposed, when he invaded north-west India in 326 B.C.

Because of the fact that chess is basically a military game, one can easily draw the parallel when looking at an old Indian chess set and the old Indian Army from which it was derived.

Thus the chariot became the modern Rook, the horse became the Knight, and the elephant the modern Bishop.

The developers of the game added two figures; the King and the Adviser or Minister, the latter transformed to the present Queen: most powerful on the chessboard because of its great manoeuvrability.

Apart from the Queen, the Rook is far and away the strongest piece. This is rightly so, if you consider the value of the chariot (from which it was derived) in warfare in those ancient times, because it combined speed with force, to the highest possible degree. The number of pieces was completed with eight Foot-soldiers, (infantry), the present day Pawns.

From India, the game spread to Persia, and then to China, and finally through Europe, by two

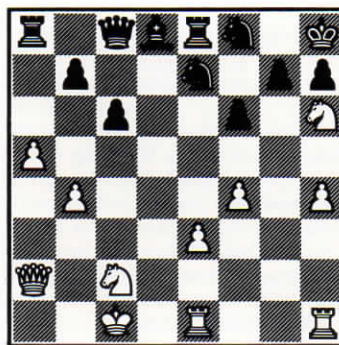
traditional means: trade and war.

Predominantly this was the result of the merchants of Venice trading with China and the Moors crossing the small strip of the Mediterranean into Spain, where the Caliphs established themselves in places such as Cordova and Granada.

They not only cultivated the mind with chess and algebra, but also cultivated the land with new methods of irrigation.

In northern Europe, the Vikings spread chess in their own way, starting with the Scandinavian countries, of course.

**Editor's Note: Maybe the number should be $2^{63}+1$ but it's still an astronomical figure.*



For chess players, here is a relatively simple game for you to continue. White to move and checkmate in two moves.

*Eric Blancquaert,
Hoddesdon*

Frank Rands

It is with deep regret that we have to announce that Frank Rands passed away on the 26th September, 1979.

Frank was a quiet and gentle man with a strong sense of loyalty and duty to the Company.

For the many who knew him, his sudden death came as a shock; the sense of loss will remain for a long time.

Frank, who had been ill for some years, had taken early retirement in the hope that by so doing his health would improve. It was not to be and on Wednesday, 19th September, 1979, he underwent major surgery.

His recovery appeared to be proceeding satisfactorily when on Wednesday, 26th September, he was taken ill and never recovered.

Frank Rands joined Telequipment in October 1959 from Cossor as Works Manager, which position he held for many years. In November 1967 he played a major part in setting-up and commissioning the Hoddesdon plant. In 1973 he was asked to take on the job of Materials Manager; this he did for four years and in 1977 he was appointed deputy to John Shafe, which position he held until he retired in December 1977.

Frank, who was a devoted family man leaves a widow, two grown-up children and four grandchildren. We join with his countless friends in extending our sympathy to all concerned.

Submitted by Stan Ripsher

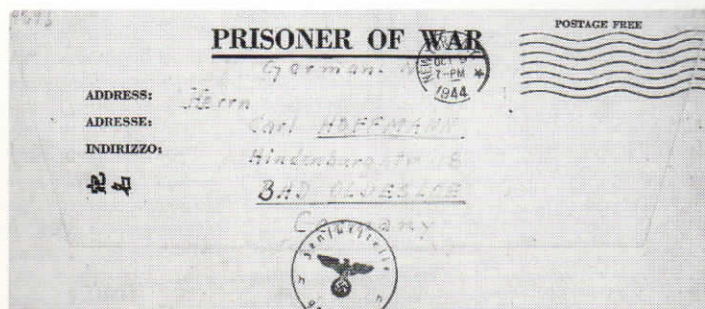
FREEPOST — 1944 STYLE

Mail from prisoners of war was always carried free of charge, so although this philatelic story does not concern a stamp of any kind, it is about a piece of interesting mail.

The German Submarine U-569 was sunk by aircraft from the light aircraft carrier U.S.S. 'Bogue' on May 22nd, 1943. The crew were taken to Papago Park Prisoner of War camp in Arizona. The above letter was written by Kapitänleutnant Hans Johannsen on 31st August, 1944, to his brother in law

who was a keen philatelist. Details of the sinking and camp were supplied, together with a copy of the interrogation document, by the National Archives and Records Service, Washington. They also traced Herr Johannsen and informed him of my interest in Transatlantic mail. During a cordial exchange of letters he was kind enough to supply the photographs below.

*John Seaman
Harpندن*



Kapitänleutnant Hans Johannsen

John gets off to a flying start

Like many teenagers of today I was in March 1935 looking around for a job. It was my good fortune to get myself an apprenticeship with Short Bros. Aircraft of Rochester, Kent, and this is where it all began.

Three years or so later I found myself part of a team of young aviation engineers, as may be seen from the photos, the company which I had now joined specialised in racing aircraft, they rebuilt, modified and prepared all kinds of aircraft for sporting events.

About this time, the British aircraft industry were in search of some way to prove to the world the quality of British aircraft and to this end, De Havilland Aircraft Co. of Hatfield produced the first 'Comet' as a research project to experiment with such things as retractable undercarriages, variable pitch airscrews and monoplanes constructed of wood, something which at this time of aviation history had the promise of producing a 'fast' airplane that is to say speeds of 200 mph and over which was almost unheard of at this time. Incidentally the De Havilland Mosquito and later the Vampire Jet was a direct descendant of the Comet and to some extent the Comet Jet airliner of later years owed its basic design to the early Comet.

However, the Comet, when first flown, achieved a cruising speed of around 200 mph and was commissioned for a number of events, King's Cup air races, etc. Its early success in racing events was due to the then quite famous pilots, Scott and Campbell-Black, who were both unfortunately killed in the Comet by another aircraft landing on top of them whilst taxiing at the new Speke Airport, Liverpool.

The Comet, after some time, was resurrected and brought to Gravesend Airport, Kent to be re-built by us, to challenge the world record



from England to New Zealand. We re-built the damaged wood structure, and re-made the undercarriage completely, along with engine nacelles and cowlings. Many of the fittings were copied from damaged samples, and the structure was assimilated to assembly drawings as no detail drawings were available. We fitted new and more powerful engines (Gipsy Six Series II) and airscrews, which were variable pitch type, later to become a standard fitment on all military aircraft in World War II.

These variable pitch airscrews were so designed that the blades could turn to present the 'leading edge' of each blade at varying angles to the air. By doing this, it eases the load imposed on the engines when the aircraft is climbing and doing much the same as a gear box in a car, enabling the revs and load to be spread more evenly in all conditions of work.

However, these particular types were of French manufacture and were rather interesting in their operation in as much as the 'Blades' were turned by an air bladder like that of a football. To be a little more

technical for a moment, in the hub of the airscrew was a cylinder and piston. The 'football' bladder was situated between the cap of the cylinder and the piston head so that if air was applied to the bladder under pressure the bladder would expand and cause the piston to move. The piston was in turn connected to the root end of the blades by suitable links and thus turned the blades. So once again, like a car, you need low gear to climb a hill, you also need a fine pitch or low gear to climb after take-off. Pumping up the bladder turned the blades to fine pitch. So we are now all set for take off. Now in order to turn the blades to coarse pitch the air must be allowed to escape from the bladder. This was achieved by fitting to the valve of the bladder a flat plate, thus as the aircraft passed through the air, pressure on the small flat plate facing the air stream allowed air to leak from the bladder. The faster you went the more air escaped until the bladder was empty and the blades were now in full coarse pitch until you landed again and the bladders were re-inflated.

Of course, if you overshot on landing, and had to go round again you were in coarse pitch and both air performance and speed were greatly impaired. Later development of this type of airscrew used engine oil pressure to do what the air bladder did and this system is still used today!

Ah well! having got all that over, back to the Comet. At last, after some months of work we were able to push the Comet with its new paint finish and registration, G-ACSS out on to the tarmac. Test flights were completed and it was scheduled that Flying Officer Chouston of the RAF and a Mr Ricketts were to make an attempt to establish a record trip to New Zealand and back in 14 days. The take-off was to be from Hatfield aerodrome early in February 1938. All went well and G-ACSS was airborne to schedule.

Four days later we got news it had come to grief at an airfield in Cyprus, near Limasol, having caught a stone wall on take-off with one of the landing wheels, this in

turn had damaged the undercarriage structure. So a rescue operation was organised in one of the firms D.H. Rapides and this, loaded with welding gear, tool boxes, took off without much preparation apart from passports and a packet of sandwiches, for Cyprus. Some four days later we arrived and in less than 48 hours we had the Comet patched up well enough to fly it home.

Once safely home, it was back to square one and re-build the undercarriage and we made some minor improvements to the cockpit, which were asked for by the pilots to add to what little comfort they could expect in this type of aircraft. The thermos flask rack was re-positioned, some padding was added to the cockpit roof to stop the pilots from bashing their heads in rough weather, likewise, pads to soften the blows to their knees on the bottom of the instrument panels. You see there was not a lot of room in the cockpits of these racing aircraft and once you were in you stayed there with little movement except arms and legs. Some instruments were damaged also and when all was ready, another date for the attempt was made and this time the place of departure was Croydon airport with a public send off from the airport Hotel early in March 1938.

This time we were lucky and no further troubles were encountered, so that 10 days, 22 hours later our Comet had flown to New Zealand and back, something that in those days was astounding.

I was presented with a silver tankard to commemorate this event by Chouston and Ricketts and I still have two of the original spark plugs from the first set of engines in this craft.

I believe G-ACSS can still be seen by the public at the Shuttleworth collection at Old Warden, Biggleswade.

Flying to me is still a way of life and I enjoy it whenever the opportunity arises but I prefer a 'windstick' out front (airscrew to you) rather than these wide bodied luxury flying blow lamps.

*John Burrows,
Hoddesdon*

Susan Heads for Stardom

Susan Coulson (daughter of Pat Coulson, Livingston Office) has recently won her way through to a place in the Scottish Youth Theatre's presentation of 'The Children's Crusade'. Susan (15) was one of 75 chosen from more than 500 applicants. The production was staged at Edinburgh's Lyceum Theatre and could secure Susan a future in acting. Susan has already gained acting experience with the Livingston Players.

At the tough audition session, Susan spoke a piece from Dicken's 'David Copperfield' and sang a song from Lionel Bart's musical 'Oliver'.

The 'Children's Crusade' was presented as part of the International Year of the Child and portrays one small crusade and a larger one led by a 13th-century German boy involving 30,000 children.



Tek UK Launch Quality and Reliability Campaign on Telequipment Products

In an effort to give our customers even better value for money than ever before, the manufacturing division is launching a campaign to reduce the cost of ownership of the Telequipment product line by increasing the Quality and Reliability of their products.

This campaign will give every employee the opportunity to play their part in raising standards throughout the whole division. The scheme is not restricted to production employees it is hoped that everyone, including our suppliers, will make the effort to contribute to the success of the campaign. Suppliers will be visited and will be given information on the campaign and on our new strengthened vendor rating arrangements.

Each period, a new poster depicting a different Quality and Reliability aspect will appear on special notice boards and will be included in *Tek Times*, together with a short report of the progress made to date on the campaign.

In a recent edition of 'Manufacturing' Dan Harper, ME Quality Assurance Manager submitted an article on quality which was written in 1961 by Domestic Operations Manager, Bob Fitzgerald. Although Dan rephrased it here and there, the meaning remains unchanged and still holds true and we feel describes ideally our philosophy on quality.

"We believe that work quality is the responsibility of every employee. We feel that to the extent that they control the factors that influence the quality of the products they build, they will be happier in their jobs and Tek will continue to produce good products.

Since each employee is responsible for the quality of his or her own work and each manager for his or her own managerial ability, both should influence the factors that lead to quality. Every employee should have appropriate tools, work space, training and standards of knowledge. Every manager should have information about output quality in order to do a better job at managing.

Quality is not created by inspection; it is not a set of standards; it may be defined as acceptability. There are different kinds of quality and they often conflict. Quality can refer to how a scope performs, how it looks, the materials used in it, workmanship, how efficiently it was made, how fast it gets to a customer or how well it suits that customer, and our friendliness and competence in answering a customer's call. No single kind of quality is supreme; none should dominate. A quality product results when all types of quality are optimized at once.

We want to assure that attention is paid to each quality aspect — performance, looks, cost, customer satisfaction. All of us should keep these kinds of quality in mind as we do our jobs. A worker who never makes a faulty part may be emphasizing workmanship at the expense of cost.

From these thoughts on quality we may draw some principles:

Each employee is responsible for the quality of each part or product he or she makes or supervises. Each employee should be held accountable for that quality.

Each employee should have control over as many factors as possible that govern and influence the quality of his or her work.

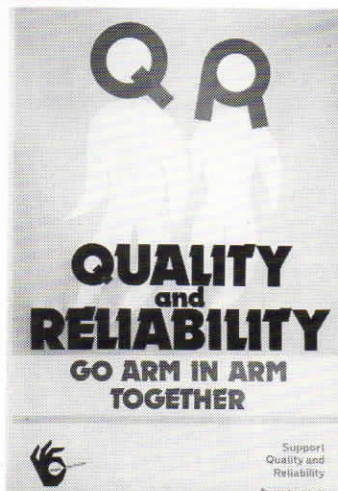
Each employee should be helped to recognize that every kind of quality is important and that one kind should not exclude another.

Methods should be made clear for resolving disputes about the relative importance of different kinds of quality. All phases of the work should reflect overall product quality.

Each employee is entitled to clear-cut standards by which to evaluate the quality of his or her work.

Each employee should get adequate information about the quality of his or her own work — good work as well as work that needs improvement. An employee is entitled to all the information a manager has about his or her work quality.

We distinguish quality assurance from quality control in that quality control is an activity carried on by worker and manager alike. Quality assurance is an examining, evaluating and reporting activity that achieves its goals by informing and guiding managers in quality considerations."



GOODBYE PEGGY

Peggy Payne from Southgate Personnel Department is shown here surrounded by her cards and gifts, and cutting a cake given to her by her many friends at Tek on the occasion of her retirement on 31st August 1979.

YOU ARE NOT ALONE?

Last month's article "We are not alone" unforgivably left out Hoddesdon and Southgate in the list of UK locations that receive *Tek Times*.

This is particularly unfair when your editors know full well that Hoddesdon contributors fill a large part of each issue, thanks to the sterling efforts of correspondent Dave Higgins. Southgate also make valuable contributions to *Tek Times* although Hoddesdon are some way ahead on points!

Our sincere apologies to Southgate and Hoddesdon readers.



Ten Pin Bowling — Issue 3 The Game

It should be stated straight off that anyone interested in learning to bowl should arrange an appointment at their local centre with an Instructor. Only general instructions can be mentioned here.

When a lane (or lanes) are ready for you to bowl on you will obtain a pair of bowling shoes from the control desk. These special shoes have the same size markings as outdoor shoes so there's no problem there. You now need to select a suitable ball. There are two factors to be considered here — weight and fit. Generally it is better to start with a fairly light ball and, if you start to bowl regularly, you can work up to the heavy stuff. An average size male bowler will probably find a 14lb ball (red) suitable, whilst females will look for a 12lb (green), or 10lb (green/red mottled) if you're wee!

Having decided which weight to use you'll need to find one that fits! Firstly find a ball in which your thumb feels comfortable when fully inserted, not too tight or too sloppy. The next test is to rest your hand on the ball with thumb inserted and examine the span between the thumb and finger holes. You've found the right ball if the middle joints of your second and third fingers extend exactly to the nearest edges of the finger holes. When you think you've found the right ball try swinging it backwards and forwards. If, on the backward swing, the ball slips, then the span is too wide, or if, on the forward swing your grip tightens, then the span is too narrow. If not satisfied then continue looking for a more suitable fitting ball. It is well worth the time taken as you will never bowl a good game with a poor fitting ball.

Having selected your ball you will now be ready to bowl. The run-up technique in ten pin bowling varies from person to person and many different styles will be seen. It is also

the very fundamental of good bowling to develop a relaxed and repetitively accurate run-up. It can be broken down into various stages as follows. Stance — Address — Four step delivery — Slide and stop — Release — Follow through.

Stance: You will need to find your starting position on the run-up. This is done by standing with your back to the lanes with your heels just short of the foul-line. Take four "normal" paces and then turn round. This will be your starting point but may be required to be adjusted slightly. There are two rows of spots on the run-up to aid you in memorising your starting position. When you have found your ideal position you should stand facing the lanes with your left hand supporting the ball at waist height and with your shoulders square to the run-up. You should be standing in a relaxed position with feet slightly apart and possibly with your left foot slightly forward.

Address: The address is simply the action of setting the ball in motion previous to running-up. The bowler should raise the ball to eye level (still supporting with the left hand) when eye level is reached the ball is shifted across to the right so that it will clear the body on the down swing.

Four Step delivery: This is by far the hardest part of bowling to learn and also to describe as it consists of a series of actions flowing smoothly into each other resulting in the left foot and bowling ball reaching the same point (just short of the foul line) at the same moment. This part of bowling can be compared to judo where the opponents' weight can be used against them. In bowling the weight of the ball becomes an aid rather than an encumbrance, but only when a smooth relaxed run-up is achieved. It's all a matter of practice.

To describe the run-up it is necessary to break it down into sections, namely PUSH — DROP — SWING — ROLL. It is with these sections that the footwork must be co-ordinated.

The four step delivery is probably the easiest to learn and can be broken down step by step.

The first step is a short, slow one with the right foot, (so anyone who's been in the forces will have to watch it). At the same time the ball is pushed forward and slightly down to

set it in a pendulum course. As the step is completed your weight will have transferred to the right foot and your supporting left hand should just be leaving the ball. As the second step is taken the ball will commence its backward swing. Your arm should be freely swinging from the shoulder with the wrist held firmly.

When the third step is started the ball should be swinging back past your body. The speed of your run-up should be increased and the ball will reach its highest point on the backswing as the step is completed.

The fourth and final step is made with your entire weight on your right foot whilst the left foot and right arm move forward together. The left foot should be slid forward rather than placed forward with both knees bent and the body leaning forward. At the same time the ball is coming forward with its own weight and your own power behind it ready to propel it down the lane. The left foot slide should be on the ball of the foot and should come to an abrupt stop just short of the foul line and coinciding with the ball being released. At this moment the left arm and right leg should be extended over to the left to maintain balance.

When releasing the ball the hand will pass over the foul line and the thumb should come out first so that the ball can be given a working "hook" with the fingers before, they too, are removed from the ball. When the ball is fully released the hand and arm should follow through and continue the pendulum movement upwards thus ensuring the complete arm movement was free and accurate. At the same time your body will become more upright and you should finish with good balance and shoulders square to the pins.

When you have developed a smooth run-up you can start to concentrate on aiming the ball and making use of the various spots and arrows on run-up and lane to assist you.

How to score: The rules are fairly simple and a sample game is displayed below to help you understand. Firstly, a game consists of ten frames. In any one frame a maximum of two balls are bowled. If all ten pins are knocked down with the first ball you have scored a strike and no second ball is bowled in that frame. A strike is worth 10 pins plus the scores of the next two balls. If all

ten pins are knocked down with two balls then you have moved a spare which is worth 10 pins plus the score of the next ball. If pins are left standing after two balls then the total number of pins knocked down is taken as the score.

The 8 pins shown at the end of the game are part of the spare in the tenth frame and only count in that frame. They are **not** added on again. Two other markings that are used are a O as shown in frame 5 and an F (not shown). An O indicates a split, that is 2 or more pins left standing after the first ball with fallen pins between them, i.e. if the 5 pin and 10 pin are left by themselves. An F indicates a foul and whatever score is made is not counted. If a foul is made on the first ball of a frame and pins are knocked down they must be replaced with a full set for the second ball. If that full set is knocked down it scores as a spare. You won't need to worry about fouls unless bowling in a league or tournament but it is a bad habit that should be avoided if possible. Purely and simply a foul is made when **any** part of the body touches the lanes or equipment or part of the building which is beyond the foul line after delivering the ball.

Etiquette: This is really just a manner of good manners but there are a few simple rules to follow.

1. Don't go on the lanes without bowling shoes.
2. Don't step onto the run-up until its your turn to bowl. After you've bowled walk back off the run-up until ready to bowl again.
3. Don't bring food and drink to the bowlers' seats or score desk. Grease or liquid on bowling shoes is dangerous stuff.
4. Don't step into the neighbouring lane when running-up.
5. When getting a ball from the rack don't walk in front of other bowlers in adjoining lanes.
6. Leave your temper behind the lanes with your outdoor shoes.

Well, hopefully after reading this you will become a better bowler, but, as stated previously, if you're really interested in learning to bowl correctly then see an instructor at your local centre.

There is no substitute for the personal touch.

Good luck and good bowling and may all your splits be little ones.

Ron Johnson,
Test Dept. Hoddesdon

GHZ how to say it

Do you know the approved pronunciation of the word GIGAHERTZ? It's the first letter G which has been the subject of some discussion lately. Most of us seem to have adopted the hard G (as in "GAG") when pronouncing the word, and most of us seem to be wrong! According to Webster's Third New International Dictionary and the 11th General Conference on Weights and Measures (Paris 1960), the correct pronunciation is "JIGAHERTZ", like in Irish "Jig".

1	2	3	4	5	6	7	8	9	10		
6	6	3	7	X	7	2	X	X	5	1	7
16	25	45	64	73	98	114	120	136	154		154.
SPARE = 10 + 6 (next ball)	16 + 6 + 3 = 25	SPARE = 10 + 10 (next ball)	STRIKE = 10 + 7 + 2 (next two balls)	7 + 2 = 64	STRIKE = 10 + 5 + 5 = 73	STRIKE = 10 + 5 + 1 = 16	5 + 1 = 6	SPARE = 10 + 6 = 16	SPARE = 10 + 8 = 18		
		+ 25 (previous score) = 45	+ 45 = 64		+ 73 = 98	+ 98 = 114	+ 120 = 120	+ 120 = 136	+ 136 = 154		

Royal Fireworks

(Photo copyright C. Thomas)

This impressive photograph was taken by Chris Thomas from the Thames Embankment. The display was watched by a crowd estimated at more than a million, the Queen herself watching from the top of the Shell building on the South Bank. Chris commented that London Transport ran buses and tube-trains for an extra hour that night so that everyone could get home — he got back home at 2am. The weather was drizzle but Chris says that this enhanced the display.

The camera used was a Rollei 2¼" square, with full aperture and 5 secs exposure. The film was push processed.



Southgate plays Harpenden

Seven-a-side football reached new heights of achievement when teams from Southgate and Harpenden battled it out on neutral ground a few weeks ago. The final score was Harpenden 3, Southgate 2.



Harpenden team, back row: Ian Simmons, Steve Yates, Gordon Knapper, Shaun Trott; front row: David Westwood, Gary Kent, Alan McHale.

Bach, Rachmaninov and D1000 Oscilloscope Production

The longer your editors work at uncovering stories for *Tek Times*, the more convinced they are that many of our readers become much more interesting people when away from work.

There may be some obscure sociological reason for this, of course, but we do no more than report the observation.

Pictured here is Kerry Gedge who works in Hoddesdon on D1000 production. Kerry has studied piano-forte and the violin for eight years and is at present studying for ex-

aminations which lead to L.R.A.M. qualifications (Licentiate of the Royal Academy of Music). At the age of 15, Kerry gave several public concerts at which she played works by Bach, Chopin, Debussy, Rachmaninov, Mozart, Beethoven and Saties. She has also played in the string section of the Harlow 2nd Youth Orchestra.

As well as taking lessons from private tutors, Kerry has studied the double-bass and intends to go on to the cello, tenor saxophone and bass guitar.



POETS CORNER

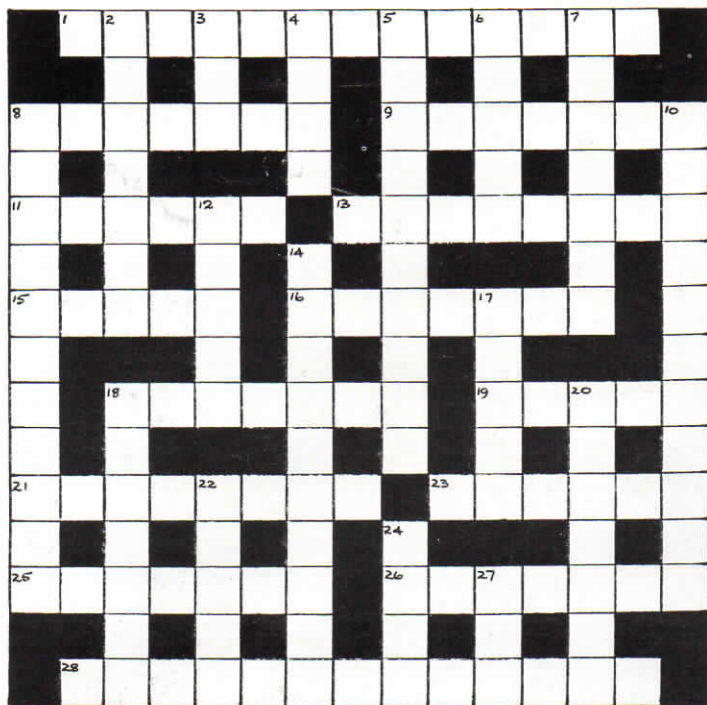
At Your Service

Do you feel a little chilly, do you feel a little hot?
Just ring up Facilities, we'll be there like a shot.
Do you want your office shifted, from A to B and back?
Just ring up Facilities, we'll be there each Man Jack.
Do you want some curtains hanging, have you got a squeaking chair?
Just ring up Facilities, you'll always find us there.
Does a big van need unloading, have you got a sticking drawer?
Just ring up Facilities, that's what we're waiting for.
Shelves and cupboards, benches, jigs, blocked up toilets too,
Just ring up Facilities, we do it all for you.
There's Arthur, Alex, Roy and Pat, and 'course there's Silent Fred.
Just ring up Facilities, we'll stand you in good stead.

A. B. Miles,
Southgate Facilities

Crossword

Compiled by Bob Orrock
Hoddesdon



ACROSS: 1 Heart failure (7-6); 8 Ring, open or box (7); 9 Drudgery (7); 11 Give rise to (6); 13 Ground dried fish (4-4); 15 System used for underwater exploration (5); 16 Obscurity (7); 18 Small bird (4-3); 19 Unemployed (2-3); 21 Coastal mound or ridge (4-4); 23 Large prawns (6); 25 Spoken in S.W. India (7); 26 Vodka drinking equestrian (7); 28 He wears a showy outfit (6-7).

DOWN: 2 Hero from "Arabian Nights" (7); 3 A fellow at Cambridge (3); 4 4840 sq. yards (4); 5 Attackers (10); 6 Small fresh water fish (5); 7 Picturesque feature of landscape (7); 8 Found washed up on the shore (5-6); 10 Elton's Road? (6-5); 12 Greek island (5); 14 Unbroken series (10); 17 Pertaining to inner Hebridean island (5); 18 Small banner (7); 20 Star of "Six

Five Special" and "Carry On" series (3-4); 22 Edible N. African berries grown in large clusters (5); 24 Trace of healed wound (4); 27 ... ——— ... (3).

Answers to issue 11



The Dishonest Magician

A magician who was, shall we say, resting between engagements found himself a job as a part time waiter in a restaurant and his first customers happened to be three gentlemen who

were on a working lunch. When the lunch was finished the bill was duly presented which came to £30 and it was agreed that each would pay £10.

The magician cum waiter after taking the money for the meal discovered that the bill should have been only £25 and therefore had £5 to hand back to the three gentlemen. "Well" thought the magician cum waiter "3 won't divide into 5 very easily" so £2 went into his pocket and handed each gentleman a £1 back so that each paid £9.

Now the problem is this, each gentleman paid £9 which equals £27 plus the £2 the magician pocketed making £29. Where did the other £1 go to? Are my mathematics wrong or does the quickness of the hand deceive the eye?

Letters to the Editor

The Editor of *Tek Times*

Dear Sir,
With regard to the article you published in the September issue of *Tek Times* submitted by Mr. John Leverton of Tektronix and Yorkshire.

The only other place Mr. Leverton has ever dined out in besides the Ski Lodge, Canada, is the Miners Arms in Garforth, Yorkshire whose menu consists entirely of a variety of tasteless, indigestible Yorkshire stodge. Therefore, it surprises me not one iota that Mr. Leverton of Tektronix and Yorkshire is able to write "with food and service of a higher standard that I have ever experienced here in the UK".

As a seasoned world traveller and gourmet, I respectfully suggest that the food and service everywhere is better than that of Mr. Leverton's Native Heath. This includes Biafra at the height of the famine.

I remain your humble and obedient servant.

Mr. D. Norris
Tektronix & Lancashire

This as you can see, gives us a good indication of how much cold water we need to bring the wine "must" up to the volume we need to make 1 gallon of wine. "What nonsense is this!" you cry, "Surely this lad at Hoddesdon must realise that there are 8 pints to the gallon," and of course you are correct. But we need that half pint of airspace in the glass demijohn to allow the wine to bubble away and ferment in after we have poured the contents of the bucket through the funnel into the jar and fitted the airlock. It should take approximately 4 weeks for your masterpiece to ferment out in a warm dark space, i.e. the airing cupboard. When you feel sure it has ceased, carefully syphon off your wine into your second glass demijohn and top it right up with cool boiled water. Hey Presto! — We have our gallon of wine. All that remains for us to do is to stretch two thicknesses of cling film over the top of the jar and stand in a cool dark place for a month or even a little longer.

If you follow the directions with care, you will now be the proud possessor of six excellent bottles of Dry Red Wine, at a cost of approximately 20p per bottle.

Dear Mr. Editor,

I feel sufficiently encouraged to ask you to inflict upon our unsuspecting readers, a simple recipe for a Dry Red Wine.

I have heard over the grapevine, (excuse the pun) that several readers have made successfully, the Dry White Wine from my article in Issue 2.

Rumour even has it that a Sales Promotion Staff Engineer, is producing it in 10 gallon batches! (Is it still fermenting Fred)? So wine lovers unite! Let us quick march into the kitchen, to survey the scene and plan the creation of this lovely claret-like wine.

A lot of the equipment we need is normally to be found in every kitchen, such as scales, measure jug, saucepans etc. We do however, need a white plastic bucket approx 2 gallon capacity, a plastic funnel 6" diameter, an air lock and bung, syphon tube, 2 x 1 gallon glass demijohns, all available from your local Homebrew shop, or large branch of Boots the Chemists. You will also be able to purchase the dried Elderberries, Pectolase, Citric Acid, Wine Yeast and Nutrient at the same time. There should be no problem in obtaining the Dry cider from your off-licence or supermarket. Blackthorn Dry Cider is particularly good. There are just a few points to remember, we must make sure that all our equipment is scrupulously clean and sterilised with Sodium Metabisulphate before we commence. It is also a good idea to make a small mark on the inside of the bucket at the level of 7½ pints volume. This of course can be ascertained by carefully measuring the water with the aid of the measure jug before you commence brewing.

Christleton Quickie (Lazy Man's Wine)

4¼oz. Dried Elderberries
2lb. Sugar
Pectolase
Wine Yeast
1¼ Pints Dry Cider
1 Heaped Teaspoon Citric Acid
Yeast Nutrient
Sufficient water to bring the total to 1 gallon.

METHOD

Place the dried elderberries in a saucepan with enough water to cover them comfortably. Bring to the boil and simmer for 15 minutes. Strain off the juice, pressing lightly, and return the berries to the pan. Add just enough water to cover, bring to the boil again and simmer for 10 minutes. Strain again and repeat this process, simmering for 10 minutes at a time, until just about all the colour has come out of the berries. Stir the sugar, citric acid and yeast nutrient into the hot liquid and put aside to cool. When down to about 80°F add the cider, pectolase and yeast starter and ferment out in the usual way.

You will finish up with an all-the-year-round light, dry red wine, equally suitable for Sunday dinner or for lazing in the garden on a hot day and maturing so quickly that it is drinkable within a couple of months of being started. I doubt if it would improve much with prolonged keeping. None of mine has ever lasted long enough to find out.

Dave Higgins
Product Control, Hoddesdon

Area Representative Meeting

The next area representative meeting is scheduled for November 1st at Southgate, under the chairmanship of David Knuth. The Management representative will be John Shafe and the guest speaker Ed Morrison, will talk on Company Structure.