



HRSA SOUTH AUSTRALIA

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From the President



My fellow collectors, Radio & TV enthusiasts,

Since our last newsletter, we have had three meetings. We thank Patrick Jackson for hosting our deferred January meeting at his home. This was followed by our auction in February.

Now that we have a new year, let this be an interesting year to keep your interests in the club going. The March meeting was a technical meeting comprised of a "hands on" radio alignment workshop which will include notes on how to do it and how to sweep align a radio using a sweep generator and a CRO. Graham Dicker has been generous in giving a short presentation on the history of the Rola tape machines. The April meeting will be a buy and sell meeting.

Yours Sincerely

Chris Ratcliff

Coming Events

29th April
27th May
24th June
29th July

HRSA Sale day at St Cyprian Hall
Auction at the St Cyprian Hall
A visit to Channel 2 (to be confirmed)
AGM and auction at the St Cyprian Hall



Unusual and rare Detrola 104 Art Deco Presentation Desk Set Radio in great original condition with beautiful inlaid wood details. This is a stately radio with Gilbert Rohde for Herman Miller clock + barometer. This radio features the same "Air-Guide" clock and thermometer/humidity as the Gilbert Rohde designed clock model Number 6381. The "Air-Guide" faces have streamline numerals, red + black hands, and a red second hand that heighten the appeal of this rare radio / clock combination.

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I am sitting at my desk reviewing the year so far and wondering what the rest of the year will look like. We had our first meeting of the year at Patrick's place which was moved forward a week because of the predicted high temperature, and it was still a hot day. It was a good turnout and after a brief meeting, members formed little groups and were chatting away and soon forgot about the heat and were having a good time.



About three weeks later we had the auction which ran very smoothly and with a reduced number of lots, finished early. Warren did a great job as auctioneer as he always does and towards the end handed the role to Alan who also did a great job in working through the remaining items. Many members went home with something new for their display cabinets and workshops and conversations continued in the car park.



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The March meeting was once again held in the St Cyprian Hall and after the meeting formality we had three presenters. Graham Dicker started the ball rolling with his interesting talk on Broadcast Recording. Graham pointed out that:

- He has about 145 tape recorders
- He bought the Rola company in 1996
- Has recorded 500 albums for the ABC
- Sold 60 of his systems to the ABC
- He has 25,000 radio episodes in his collection including Chicken Man
- Also has a large collection of Master Tapes used to record vinyls.



Chris Ratcliff went to great lengths so that members could have a "Hands On" experience of aligning a radio. Members who did not attend this meeting and have never done this really missed out. I have never aligned a radio myself and appreciated the opportunity. It is so good to see club members sharing their knowledge and wisdom with other members.



Craig Jackson finished off the presentations with the designs of his amplifiers explaining the process he used to solve the technical hurdles and how he was able to make them perform as good as, if not better than others that he had come across.



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Extracted from the internet:

I read an article on the Keelynet website that piqued my interest a couple of years ago: It was all about receiving and transmitting radio signals *through the ground*. The story goes that underground antennas were experimented with as far back as Tesla, and a 1912 patent by one James Harris Rodgers shows several ways of implementing an antenna which amounts to burying a dipole or helix in the ground, and, I assume, depending on the ground currents (induced by the radio wave being transmitted above the ground) to provide long distance, relatively *static-free* radio reception. This involved both transmitting and receiving; I decided to K.I.S.S. [keep it simple, stupid!] and play around with just the receiving part.

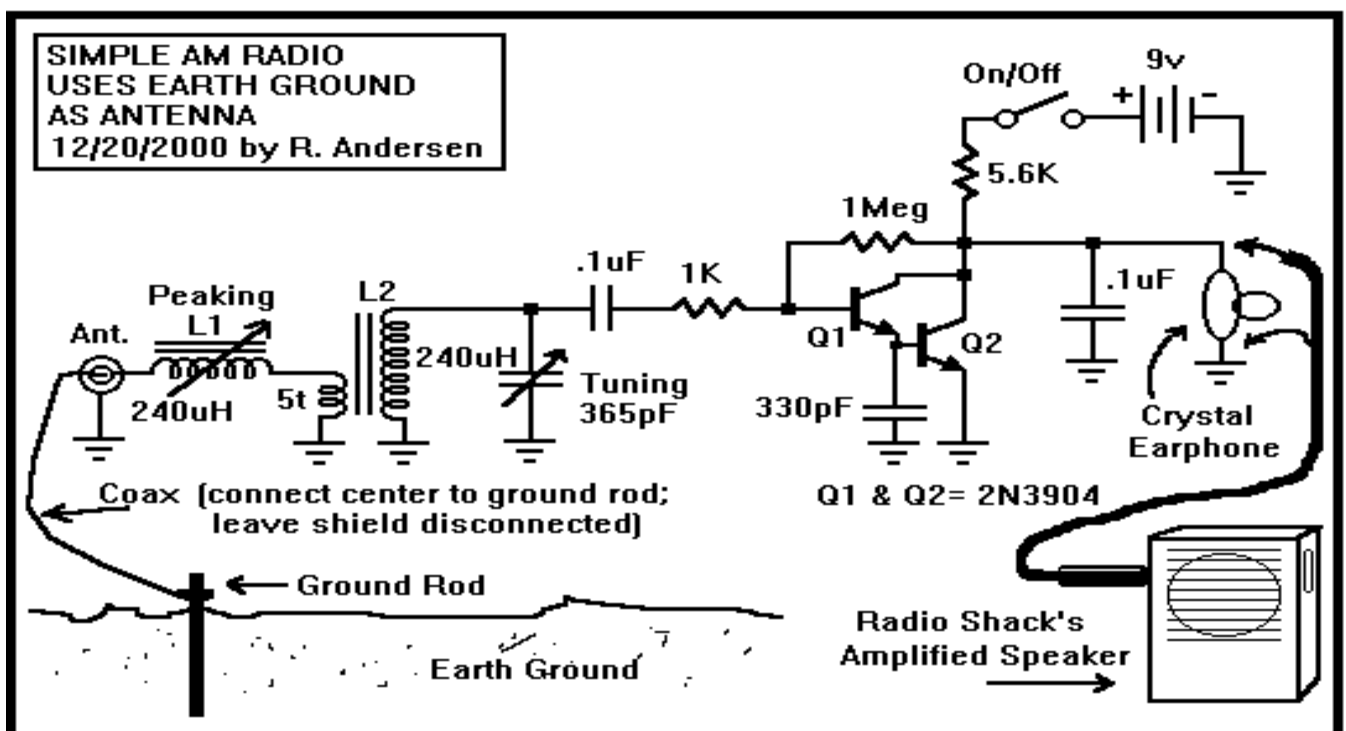
The schematic shows a simple TRF-like AM detector feeding a Radio Shack amplified speaker (the little beige ones they've sold for many years at \$13.95), whose "front end" is connected antenna, but to a *grounded rod*, through a short piece of coaxial cable. Using two transistors in a Darlington configuration raises the impedance seen by the LC tuned circuit, giving less loading and more selectivity.

The 1 k ohm resistor in the base of the Darlington transistor pair helps prevent oscillation; the 330 pF to ground on the transistors was found to improve the overall gain (volume).

Like any or all of these simple radios, you're not to expect superb performance; rather, the fascination is in how well they do work for such a small parts count. The "ground" radio did do better with a normal, above-ground antenna, but it did a surprisingly good job picking up AM radio stations "through the ground" also.

A variation on this setup would be to pound another ground rod some feet away, and connect the circuit's ground to that one. You would most likely need to readjust the inductance at the front end to accommodate the new impedance.

You do hear *some* static and impulse noise, by the way, during a summer night when thunderstorms are approaching. But in general this radio is quieter, static-wise, than a radio using "sky waves".



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This next article was sent to me by John Crawford and I am presenting it as I received it.

NIKOLA TESLA AND HIS VIBRATION MACHINE

Many years ago I read a story about , Nikola Tesla, one of my favourite historic engineers. It described how he built an oscillating weight in his premises, trying to find the resonant frequency of the earth. It was moderately successful, and as the building started to vibrate, the water service pipes along the street outside fractured, and flooded the police station next door.

Searching on the internet, I find that my recollections is only partly true. But let me quote Tesla's own words to explain:

"I was experimenting with vibrations. I had one of my machines going and I wanted to see if I could get it in tune with the vibration of the building. I put it up notch after notch. There was a peculiar cracking sound.

"I asked my assistants where did the sound come from. They did not know. I put the machine up a few more notches. There was a louder cracking sound. I knew I was approaching the vibration of the steel building. I pushed the machine a little higher. "Suddenly all the heavy machinery in the place was flying around. I grabbed a hammer and broke the machine. The building would have been about our ears in another few minutes. Outside in the street there was pandemonium.

"The police and ambulances arrived. I told my assistants to say nothing. We told the police it must have been an earthquake. That's all they ever knew about it."

Nikola Tesla revealed that the earthquake which drew police and ambulances to the region of his laboratory at 48 E. Houston St., New York, in 1898, was the result of a little machine he was experimenting with at the time which "you could put in your overcoat pocket."

While I never associated him with being a snake oil salesman, I find the following fascinating. It was written by Tesla some years later. I apologise for its length, but in seeking to describe advertise a new laxative treatment, while describing bodily functions in a manner acceptable to his sensitive audience, it is quite verbose. I wonder if the oil added to its effectiveness, maybe it was castor oil?

John Crawford

MECHANICAL THERAPY by NIKOLA TESLA

In order to convey a clear idea of the significance and revolutionary character of this discovery it is indispensable to make a brief statement regarding ELECTRICAL THERAPY.

Fifty years ago, while investigating high frequency currents developed by me at that time, I observed that they produced certain physiological effects offering new and great possibilities in medical treatment. My first announcement spread like fire and experiments were undertaken by a host of experts here and in other countries. When a famous French physician, Dr. D'Arsonval, declared that he had made the same discovery, a heated controversy relative to priority was started. The French, eager to honor their countryman, made him a member of the Academy, ignoring entirely my earlier publication. Resolved to take steps for vindicating my claim,

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I went to Paris, where I met Dr. D'Arsonval. His personal charm disarmed me completely and I abandoned my intention, content to rest on the record. It shows that my disclosure antedated his and also that he used my apparatus in his demonstrations. The final judgment is left to posterity.

Since the beginning, the growth of the new art and industry has been phenomenal, some manufacturers turning out daily hundreds of sets. Many millions are now in use throughout the world. The currents furnished by them have proved an ideal tonic for the human nerve system. They promote heart action and digestion, induce healthful sleep, rid the skin of destructive exudations and cure colds and fever by the warmth they create. They vivify atrophied or paralyzed parts of the body, allay all kinds of suffering and save annually thousands of lives. Leaders in the profession have assured me that I have done more for humanity by this medical treatment than by all my other discoveries and inventions. Be that as it may, I feel certain that the MECHANICAL THERAPY, which I am about to give to the world, will be of incomparably greater benefit. Its discovery was made accidentally under the following circumstances.

I had installed at the laboratory, 35 South Fifth Avenue, one of my mechanical oscillators with the object of using it in the exact determination of various physical constants. The machine was bolted in vertical position to a platform supported on elastic cushions and, when operated by compressed air, performed minute oscillations absolutely isochronous, that is to say, consuming rigorously equal intervals of time. So perfect was its functioning in this respect that clocks driven by it indicated the hour with astronomical precision. One day, as I was making some observations, I stepped on the platform and the vibrations imparted to it by the machine were transmitted to my body. The sensation experienced was as strange as agreeable, and I asked my assistants to try. They did so and were mystified and pleased like myself. But a few minutes later some of us, who had stayed longer on the platform, felt an unspeakable and pressing necessity which had to be promptly satisfied, and then a stupendous truth dawned upon me.

Evidently, these isochronous rapid oscillations stimulated powerfully the peristaltic movements which propel the food-stuffs through the alimentary channels. A means was thus provided whereby their contents can be perfectly regulated and controlled at will, and without the use of drugs, specific remedies or internal applications whatever.

When I began to practice with my assistants MECHANICAL THERAPY we used to finish our meals quickly and rush back to the laboratory. We suffered from dyspepsia and various stomach troubles, biliousness, constipation, flatulence and other disturbances, all natural results of such irregular habit. But after only a week of application, during which I improved the technique and my assistants learned how to take the treatment to their best advantage, all those forms of sickness disappeared as by enchantment and for nearly four years, while the machine was in use, we were all in excellent health. I cured a number of people; among them my great friend Mark Twain whose books saved my life. He came to the laboratory in the worst shape suffering from a variety of distressing and dangerous ailments but in less than two months he regained his old vigor and ability of enjoying life to the fullest extent. Shortly after, a great calamity befell me: my laboratory was destroyed by fire. Nothing was insured and the loss of priceless apparatus and records gave me a terrific shock from which I did not recover for several years. The enforced discontinuance of MECHANICAL THERAPY also caused me deep regret. I had evolved a wonderful remedy for ills of inestimable value to mankind and invented apparatus offering unbounded commercial possibilities but when I came to consider practical introduction I realized that it was entirely unsuitable.

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It was big, heavy and noisy, called for a continuous supply of oil, part of which was discharged in the room as fine spray; it consumed considerable power and required a number of objectionable accessories. During the succeeding years I made great improvements and finally evolved a design which leaves nothing to be desired. The machine will be very small and light, operate noiselessly without any lubricant, consume a trifling amount of energy and will be, to my knowledge, the most beautiful device ever put on the market. The intention is to exhibit it in action at the occasion of my annual reception in honor of the Press which has been, unfortunately, delayed this year, and I anticipate that it will elicit great interest and receive wide publicity. Unless I am grossly mistaken it will be introduced very extensively and, eventually, there will be one in every household.

The practical application of MECHANICAL THERAPY through my oscillators will profoundly affect human life. By insuring perfect regularity of evacuations the body will function better in every respect and life will become ever so much safer and more enjoyable. One of the most important results will be the great reduction — amounting possibly to seventy-five per cent — in the number of heart failures, which are mostly caused by some acute upset of the digestive process and normal operation of the stomach. Another vital improvement will be derived from the quickened removal of toxic excretions of organs affected by disease. It is reasonable to expect that through this and other healthful actions ulcers and similar internal lesions or abscesses will be cured and relief might be obtained even in case of a cancer or other malignant growth. Skilled physicians and surgeons will be able to perform veritable miracles with such oscillations. They stimulate strongly the liver, spleen, kidneys, bladder and other organs and by these desirable actions they must contribute not a little to well-being. Persons suffering from anaemia of any form will be especially helped by the treatment. But the greatest benefit will be derived from it by women who will be able to reduce without the usual tantalizing abstinence, privation, sacrifice of time and money and torture they have to endure. They will improve much in appearance, acquire clear eyes and complexions and it may be safely predicted that long continued treatment will bring forth feminine beauty never seen before. It is not to be forgotten that the elimination of countless drugs, patent medicines and specific remedies of all kinds taken internally, by which millions of people doom themselves to an early grave, will be of untold good to humanity.

BELOW: January 2018 Retirees Luncheon & Next Page the March 2018 Retirees Luncheon



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FROM THE HENDON FILES

The Transformer Core:

This same lad was given the task of rewinding the secondary of a large power transformer to obtain a lower voltage. It took many hours for him to remove the transformer laminations before he could work on the secondary winding as instructed. The following day after he had successfully modified the winding he decided that he had better test the transformer before re-assembling it as he dreaded the task of re-laminating the core. At this point someone intervened to tell him that the transformer would not work without the core. He would not believe this and proclaimed that the core was only a mechanical frame to keep the windings safely mounted. Before he could be stopped he applied mains power to the primary winding; smoke belched from the winding and seconds later a fuse blew. The winding was destroyed and a new transformer had to be obtained.

Committee

Members of the public are requested to direct all enquiries, including those regarding membership, information on radios (wireless sets) and the estimated value of radios (wireless sets), to the Group Secretary please.

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