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Keeping the Memory Alive

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THE TRACKERS'

CROCNICLE

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NASA and the Omega Speedmaster

From the now defunct website "clubspeedmaster.com".

NASA have exhaustively tested the Omega Speedmaster and the later renamed Speedmaster Professional models three times making it one of the most tested watches of all time.

In light of the 16 year spread in this testing and evaluation program, it is clear that both the early Speedmaster and the later Speedmaster Professional models and both the early Cal. 321 & the current Cal. 861 movements were all thoroughly tested.



First manufactured in 1957 by Omega Watch company in Bienne, Switzerland, the Speedmaster Professional is a chronograph capable of measuring elapsed time in seconds, minutes and hours. The black anodized multi-dial face with luminous markers is housed in a stainless steel waterproof case. There are 150 separate parts and the chronograph is anti-magnetic and shock protected. There is a tachymeter outer scale used for calculating speeds or unit per hour production.

In the early days of the space program during Project Mercury, wrist timing devices were used for manned space flight as a backup to the on-board timing devices. There was no watch that was "standard issue" during Project Mercury. It was the astronaut's choice to wear/not wear a wrist timing device, and to choose the make/model he thought best. Astronauts Shepard, Grissom and Glenn wore no watch. Scott Carpenter wore a Breitling Navitimer.

The Omega Speedmaster was first flight tested in space by Walter Schirra aboard Sigma 7, October 1962. The Omega ran flawlessly and was used as backup to the on-board clock. On-board timing devices in the Mercury capsule were internal to the spacecraft and wristwatches had not undergone rigorous testing, as the astronaut never left the protected environment of the spacecraft. On the last Mercury Mission, Gordon Cooper wore both the Omega Speedmaster and a Bulova Accutron Astronaut in order to compare the accuracy of the manually-wound Omega to the then new electronic Bulova. The Omega was used to time the firing sequence of the retro rockets for re-entry.

However, with the Gemini and Apollo programs, astronauts would also need wrist timing devices to help them with EVA activities, such as spacewalks, photographic timing exposures, and timing fuel cell purges. Such a watch should be able to operate in the vacuum of space where there exists wide variances in temperature and pressure. The primary requirement for the wrist timing device was to provide the capability to perform short interval timing and backup for the main spacecraft timing device. Initially, a manually wound watch was required, as the "self-winding" watch mechanisms depend upon the action of an inertial pendulum (stet) in a gravity environment for performing the winding function. Consequently, these devices would not function in the reduced gravity environment encountered in space flight.

To be continued

Whereabouts?

As a result of Paul Dench supplying his "staffing list", augmented courtesy Brian Milne, the "Whereabouts" table of those for whom we have no contact details has expanded to more than one page. Thanks to those who have sent updates.

C Abott	L Donkin	John Keane
Eric Ainsworth	John Draper	Mike Keen
Gay Albon	Mike Dresser	Jim Keenan
Bill Arbery	Bruce Duff	John Kelman
Allan Barber	I Dunleavy	Roy Mallinson
John (Allan) Barber	Dave Elliot	Bob Marr
Matt Barber	J Erickson	Keith Mathieson
Keith Barnard	Ian Few	Alec Matthews
Barrow	Ian Findlay	K McCarson
Deidre Beaumont	G Francis	Ian McDonald
Elizabeth Beckett	Ben Franklin	S McDonald
Keith Beveridge	David Froom	Frank McGregor
Michael Billings	Jamie Gardiner	Eileen McLaughlan
G Bond	L Gardner	Don McLellan
S Boyce	S Garner	Nola Meiklejohn (O'Byrne)
Bill Boyle	G Carrick	R Miller
B Bradley	C George	Ray Mills
Phil Brindley	Joe George	Marilyn Milner (Gobby)
Hans Britz	Richard Govern	John Mogg
Dave Brooks	Brian Gray	Sharon Morgan (Todd)
T.F.A Brown	Terry Haggett	J Murray
W Brown	Peter Hardwicke	Dennis Naylor
J Burdett	Ron Harnes	Gloria Neal
R Burdett	Anne Harvey (Brookes)	Ellie Nichols
Robert Burns	D Hatch	K Elton Nickerson
Joy Cameron	Gail Heileman	Graham Nielsen
Geoff Cardwell	Stan Hills	John Noble
John Cawthrey	Ernie Hindley	? O'Brien
Brian Clifford	Dave Hine	Joan Oats
Keith Clifton-James	A Holgate	W Oliver
Barbara Cobcroft	Phyllis Hook (Watson)	Denis Owens
Jim Crossland	J Hopkins	John Paddon
Noel Cunningham	Vivienne Lawer (Hopper)	Diane Pitman (Housley)
F Dawes	Deidre Howard	John Platten
Andrew Dempster	B Hughes	D Powell
Jean DeVis	Ed Humphreys	M.J.K Power
Marilyn Dick	B Hunter	Wendy Puccinelli
Olive Dick	D Hutchins	Lorna Quinn
Neville Dippell	Ian Jones	
Cheryl? Dixon	Vera Kastropil	

The quest continues; the list has got a bit shorter, thanks to George Allen et al. I have been given information concerning the possible whereabouts of a few of these, but so far have not been successful in obtaining, or confirming, details. The last Reunion Dinner brought out some missing persons, but there are also a few who do not wish to be contacted.

Whereabouts? ctd.

Roger Ramsden	George Sefton-Bellion	Christine Thomas
A Rees	D Selby	Howard Thomas
Dave Rendell	Ron Shand	Don Thompson
Frank Rice	Fred Sharland	Jack Thompson
Doug Richards	? Sheehan	Patsy Thompson (Nolan)
D Richardson	Jeff Shuttleworth	Larry Tomkins
Harry Richmond	Ray Skender	Frank Toomey
Ralp Richmond	Lyn Smart (Willis)	Mike Travell
Dave Rickards	J Smith	Ernst Uhl
G Riley	George Small	Tony Vingerhoets
Brian Robinson	P Smith	Dave Walker
Lynne Rosser	Roger Smith	Tom Ward
Ted Rosser	Dave Standbury	Mrs B Ward
Lindsay Sage	John Stanton	N Wardle
Stewart Sands	Bill Smythe	A Watermeyer
Ron Sargeant	Hazel Snook (Howse)	Irene West
Bob Scott	Barbara Stephenson (Vernon)	Bernie Wilbourne
Lorraine Scott-Malcolm (Erlandsen)	Barbara Teahan	Glen Williamson
Michael Scott-Malcolm	Barbara Teasdale	Garnet Wilmott
Russell Schwarzer	Des Terrill	Brian Wilson
Dorcas Sefton-Bellion		Ray Zatorski

Catch the Buzz



The "Catch the Buzz!" DVDs are now available for sale at the museum. Cost is \$22.00 plus postage. It features:

- Carnarvon Airport Welcome;
- Kids Q & A;
- Cocktail Party, which includes Buzz's inspirational speech, and
- Opening of museum

It is a great memento if you were there; if you weren't ...you'll wish you were! But at least now you'll feel part of one of Carnarvon's biggest events.

Please order through the website at:

<http://www.carnarvonmuseum.org.au/buzz.html>



From A Carnarvon Viewpoint - ctd.

Gemini III

The first Gemini manned flight.

24 March 1965 AEST

By Hamish Lindsay

Grissom and Young were woken up 0440 am local time in the crews' quarters on nearby Merrit Island. After a breakfast of Porterhouse steak and scrambled eggs, they were driven out to the astronaut 'ready room' in a two-car motorcade. Arriving at 0600 they suited up and by 0705 were heading for launch Pad 19. Grissom followed Young to the elevator and they were whisked up to the 11th level.

The crew entered the capsule ahead of schedule at 0712, with the count at T-103 and counting. Tracking stations around the world were 'green,' ready to support. The hatch was closed at 0734 am.

The count was held at T-35 minutes for a leaking oxidizer line. Technicians tightened the valve coupling and with the erector lowered, the count proceeded to a lift-off. The count was ahead of schedule by about 20 minutes, and Young complained about all that extra time spent lying on their backs, just waiting. The overcast weather cleared just in time for the launch.

Launch

At Carnarvon, Operations Supervisor Dick Simons sat down at the Operations Console, and began to bring the station together over the intercom. Author: "We all settled down to our mission stations and listened to the count down on our headsets. This was our first real mission, a great moment after the many months of preparation.

While I was double checking all the settings I was surprised to receive an order from Capcom Conrad to tune in to the short wave Voice of America, to give him the launch description in real time. The Voice of America fed us a continuous stream of information in great detail, much more than the occasional brief comment down our private SCAMA phone line from the Cape. As I had to use a mission radio receiver, the moment the spacecraft was off the ground I had to switch back to mission configuration.

At last we heard Cape Capcom Gordon Cooper say, "*You're on your way, Molly Brown.*"

Grissom responded with: "*Yeah, man.*"

A Titan II GLV booster sent Gemini III into orbit from pad 19 at Cape Canaveral. Within 60 seconds the vehicle was speeding upwards at 1,059 kilometres per hour, the crew pulling 2gs. By 2 minutes, still on the main Titan booster, they were travelling at 4,828 kilometres per hour. After staging at 02:35, when the big Titan booster dropped off, they increased speed to 10,460 kilometres per hour on the second stage. At 4 minutes 35 seconds they were travelling at 19,300 kilometres per hour and pulling 3.5gs. At 5½ minutes the second stage shut down and explosive bolts severed the second stage from the spacecraft. Grissom then fired the aft thrusters to kick them into an initial orbit of 161 by 224 kilometres.

At 0:37:18 GET (Ground Elapsed Time) over Africa Grissom noticed, "*There is lightning out there.*"

Young, "*Yep.*"

Grissom, "*Look at that stuff going by. Oh, boy! Really does sparkle doesn't it?*"

Young, "*Yes. There's the Southern Cross and Alpha and Beta Centuri.*"

Young commented after the mission on the view from space, "*There aren't words in the English language to describe the beauty. I was supposed to monitor the inertial guidance system but found it a tremendous effort to get your head back in the cockpit.*"

To be continued

The Carnarvon Space Festival ctd.

Built in 1897 of Jarrah, it's the longest jetty in North West



Carnarvon Jetty
Courtesy jayessbank

Australia, and was used for transferring passengers, supplies, livestock and wool from the region. After the museum we passed amazing

waterfront mansions; the Fascine where we used to sail our little boat; the fishing port, which didn't exist when I was last here, and through the old tracking station houses where I saw our old family house in Hubble Street. I didn't recognise anything. Green lawns, gardens with trees and bushes hid the houses - when I last saw these houses they were new, so it was a sea of bare fibro walls and fences, surrounded with sand and clay and brave attempts at sowing plants and grass.

We were driven out to the OTC museum site for the official opening of the Museum at 1030. Buses deposited us to join the 200 invited guests crowded into the small enclosure just outside the museum.

Professor Lyn Beazley welcomed the distinguished guests and opened her speech with, "Western Australia has a very proud history in space. From the very first astronomers, people who walked this land forty ...fifty thousand years ago...perhaps earlier than that, and



Professor Lyn Beazley
Photograph - Schellie-Jayne Price

read the stars so knowing the time of night and the time of year could navigate over our vast continent ...that's an absolutely amazing achievement, and only by reading the patterns of the stars could you do that. Just imagine us without a GPS trying to cope on doing the same thing.



The Emu
Courtesy Alec Kennedy

Seeing the Emu in the sky - not looking at the Milky Way but seeing the dark areas that spell out the Emu and knowing from the seasons

when the beak was high up that's when you collected the eggs to make the best cakes, I am told, or low towards the horizon.

And of course many other things we see only in our beautiful southern skies - the Magellenic Clouds, the Southern Cross," she looked across at James Aldrin, "I think, James, you have now seen it, you hadn't seen it before? He's nodding, that's wonderful. And the great globular clusters, and of course we have one of the largest meteorite collections in the world, our scientists at the WA museum are busy studying them as we speak.

Coming to the modern era, John Glenn flying over our city and calling Perth the city of light and realising after crossing the darkness of the Indian Ocean there really is life on the planet to welcome him back after his first orbit around the world, the first American to do so.



John Glenn
Courtesy NASA

To be continued

Mechanical Problems

It is regretted that as a result of recurring mechanical problems with the equipment used for the production of the place mats there will be an unavoidable delay in supplying them to those who paid for tickets to the Reunion Dinner.



Apollo 11 45th Anniversary Lunch

Message from Chris Kraft NASA's First Flight Director

July 14 2014



We were all very fortunate to have lived in the Time of Aquarius and to have been granted the privilege of being an integral part of the team that made it possible to land men on the Moon and return them safely to earth.

Each year as we get further away from that time period it becomes even more significant.



The people in Australia operating the electronic equipment were indeed a large part of the tracking system so vital to communicate with and thereby control the mission while advising the astronauts on the procedures required.

I still vividly remember the situation on the plains of Australia as those beautiful antennas received the transmitted signals from the Moon. The feeling we had as we saw the telemetered signals activating our displays and hearing the voices of Armstrong and Aldrin as they struggled to deal with the problems they had remain indelibly emblazoned in our memories. It was a chilling and historical moment. That of course was capped off by the "eerie" television signals that came to us by way of the antennas in Australia. I know all of you still have the tremendous feeling of joy and accomplishment of that day.

Tec Roberts and I visited with many of you in 1967 when we spent almost 3 weeks traveling around your country and getting to know many of you now gathered there to celebrate this awe inspiring occasion. We had a wonderful time being with you and being exposed to your traditions.

Congratulations to all of you and please accept my thanks and good wishes for such a marvelous job well done.

Sincerely,

Chris Kraft

Retired Director, Johnson Space Center
and NASA's First Flight Director.

The Fisherman Who Rode a Horse

Continuation of an extract from the autobiography of Ken Watters.

"What came over those guys?" I asked John as we walked back to the receiver van.

"Beats me. Don't worry about it.

I continued to get the cold shoulder from the Americans for the rest of that day and the next day started off in the same manner. Eventually I worked up enough steam to ask what the problem was.

"Listen fellas, it's obvious that I have upset you guys somehow. How about letting me in on what I have done?"

"You called us Yankees, we are Texans", one of them fired back at me.

"Cripes, I didn't know the war was still on in America, I'm sorry."

My apology didn't make much difference, I continued to get the cold shoulder. I thought to myself that I had to get back at these buggers somehow and focused on the fact that most Texans thought that everything was bigger and better in Texas than any where else.

I visited the Shire library the next time that I was on afternoon shift and found the Commonwealth year book. I found that the largest cattle station in Australia at the time was Victoria Downs in the Northern Territory as it happened the same Lord Vestey that owned Nor West Whaling also owned Victoria Downs. I then went to the atlas and found the size of the state of Texas. Armed with this information I was keen to get back to work.

"I hear that you have some big cattle ranches in Texas", I asked the Americans that afternoon as they were getting ready to go home for the day.

"Sonny we have the King Ranch."

(You beauty, I thought.)

"I bet we have bigger ones here in Australia."

"No way sonny."

"I bet you a carton of beer that Victoria Downs in the Northern Territory is bigger."

"You're on."

I dropped the Year Book on the table and the atlas that I had borrowed from the library.

"It says here that the Victoria River Downs Station is square miles. That is as big as the whole state of Texas", I said with a huge grin.

Let me see that", one of them asked.

Needless to say, things cooled even more between us but they started it and I never did get my beer.

Mum and Dad were over the moon when news came from the State Housing Commission that they could have one of the new houses being built in Carey St. in the new South Carnarvon subdivision. Dad borrowed Kiwi Buchanan's truck and we all headed down to Denham to collect the furniture from the house that Dad had finally managed to sell. It was a great wet weekend. We loaded Kiwi's truck with as much as we could fit in plus the two trailers we had towed down from Carnarvon. It nearly broke Mum's heart to leave some of the furniture behind for the new owners.

To be continued

Social Club News - November 1970

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STATION NOTES

The decrease in Apollo activity over the past year has caused many superficial changes on the Station but in spite of this, we have continued to find more than enough activity to occupy us. Logistics in particular have been hard at it with a marathon stock-check of all their 35,000 line items and Facilities have been busy refitting some of the Power House and in sorting out those multitude of things that can go wrong.

The Tropospheric Scatter Link has been dismantled and taken away. This equipment was a reminder of the times when communications to Perth were dependent on an overhead route of telephone wires which was constantly being knocked down by trucks or cars or blown down by gales.

The housing position is looking up again with a second lot of 18 R&I Bank houses due for completion during the next few weeks. There are a few alterations compared with the first 10 but they are still of a good high standard.

We welcome all the new arrivals and in particular, those from the U.K. who are our first recruits direct from the U.K. in over 5 years. Carnarvon can never be said to be a beautiful place but it is friendly and the climate is good. I hope you enjoy your stay with us.

The new arrangements for the canteen have resulted in improved meals being available. I hope that the alterations which are scheduled, will be complete by March.

The Social Club has been very active this year and is to be congratulated on the constant procession of rallies, parties, outings which have contributed considerably to the morale of the station. I hope that the Christmas arrangements go with their customary smoothness.

I expect 1971 to be a fairly busy year operationally with two Apollo launches and a host of scientific launches to keep us in practice. Beyond that again, I expect the Station to become even busier, possibly more busy than it has ever been, when Skylab is launched.

A Merry Christmas and A Happy New Year to everyone.

Opening of Museum - Phase 2

Good news from Eventscorp. They have granted the museum a nice amount of money to bring Australian Astronaut Andy Thomas out from the US to open "Phase Two" of the museum in September. So jot the dates down now. **Friday September 19 and Saturday September 20** to be in Carnarvon.

In the evening of Sept 19 it is planned to host our Cocktail Party fundraiser at the Woolshed at the Carnarvon Civic Centre. The idea of this instead of holding the function up at the museum is to save money. I would prefer to have it on site at the museum, but to hold it up there requires hiring a large marquee. The one we hired last time cost \$36,000. so you see why we aren't doing that this time around.



We will have a live hook up to the International Space Station on the night. Meg Travers has assisted greatly with this. Some of you may have attended the function a couple of years back in Perth when it was the 50th anniversary of John Glenn's Mercury Flight over Perth. Meg organised that event. She has also volunteered to provide music for the night as she is also a musician. Meg and her fellow muso's are putting a special soundtrack together for the evening.

LOS



Colin Clark

It is with regret that I have to advise the passing of Colin Clarke, age 73.

Colin passed away in Canberra, ACT on Sunday, 3rd August 2014.

He was cremated, in Canberra on Tuesday, 12th August 2014.

He will be remembered as our draughtsman at the Tracking Station.

Our sympathies are extended to his family.

Also, I regret to advise that Ivan McLean passed away in the Murray District Hospital on 9th August 2014.

He will be remembered as the Tracking Station's first storeman and stalwart of the Trackers' Soccer Club before resigning to take over management of, what was then, The Highway Motel.

He was privately cremated in accordance with his wishes.



Ivan McLean

Extracts from "Recollections From My Years At Carnarvon"

David Johns

Arriving at Carnarvon

It was a Saturday night when I drove into Carnarvon. I had been told in Sydney that I had been booked into the Port Hotel. When I arrived, Peggy, the receptionist at the Port Hotel, said that they had never heard of me. When I said I would be working at the NASA tracking Station, they said "oh that's OK then, you're a tracker" and they put me in one of the 18 odd units that were at the back of the Hotel, units that were permanently hired by the Tracking Station as single staff accommodation. I later learned that just about every single tracker had initially lived in the units at the back of the Port Hotel - a sort of single tracker's obligatory initiation for life in Carnarvon.

So that was it, for the next few years, I would be a "tracker". There were several loose socio-economic groupings in the town. People who worked on the sheep and cattle properties were "station people", those from the fishing industry were "prawners", those from the tropical fruit and vegetable farms along the river were "plantation people" and those who worked for OTC or NASA were "trackers".

I spent Sunday walking around Carnarvon. There were some brick houses but mostly the houses were constructed of low cost materials and there was a working class pragmatism about most of the town. It was about a week before Christmas, the weather was hot, and the seasonal south west breeze was strong and there was a haze of lethargy in the air. Initial impressions can create lasting memories and I particularly remember noticing that though most of the Carnarvon streets were wide, where there was bitumen, it was mostly a narrow strip in the centre with wide red sandy edges to the roads and kerbed gutters with the effect that cars often drove on the edges and the cars and the wind would raise the red

dust so that there was frequently a red haze of dust around the town. I learned later that at that time of the year, a clean white shirt would usually have a red collar by midday.

In the 1950's and '60s, the nearby Gascoyne River had flooded through the town. Levy banks had since been constructed around the town. Once the levy banks were completed, the town could expand and a new suburb "Morgantown" was being built to accommodate a growing workforce at Carnarvon. Over the next few years I visited the homes of many of the trackers at Carnarvon. It was noticeable that while most of them were happy to be at Carnarvon, they tended to see it as a temporary chapter in their lives and few of the trackers put down permanent roots while at Carnarvon. Very few of the trackers had nice gardens or planted anything for the future. They tended to put most of their spare time into their recreational interests. The party goers tended to have more parties, the fishy people did more fishing and the drinkers did more drinking.

On the Monday, I went to the Tracking Station. There was a boom gate with a gate man to control access to the site. The main administration and operations building, or the T&C (Telemetry & Control) building was on the top of the hill with about 100 operational and administrative people working there, some coming and going at odd hours to correspond with whether the moon was above the horizon or not. There were four other work areas on the site with about 50 more staff, Q6 Radar; Range and Range Rate; Facilities and Stores; and SPAN.

The SPAN site was to be my work site for at least the next two years. As it turned out, I was there for three and a half years.

To be continued

Keeping the Memory Alive

KEEPING THE MEMORY ALIVE



Carnarvon Tracking Station 1964 - 1975



Present Day

[Click for full size](#)

Mick and Sue Coffey's Carnarvon Steel Supplies of Cornish St Carnarvon fabricated and donated the sign

Signwriting generously donated by W&K Painting of Egan St, Carnarvon

Photograph by Phil Youd - Edited by Terence Kierans

[Click here to commence entry to the original station](#)

My sincere thanks to all of those who have contributed to the website so far;
listed at: http://crotrak.com/thank_you.htm .

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