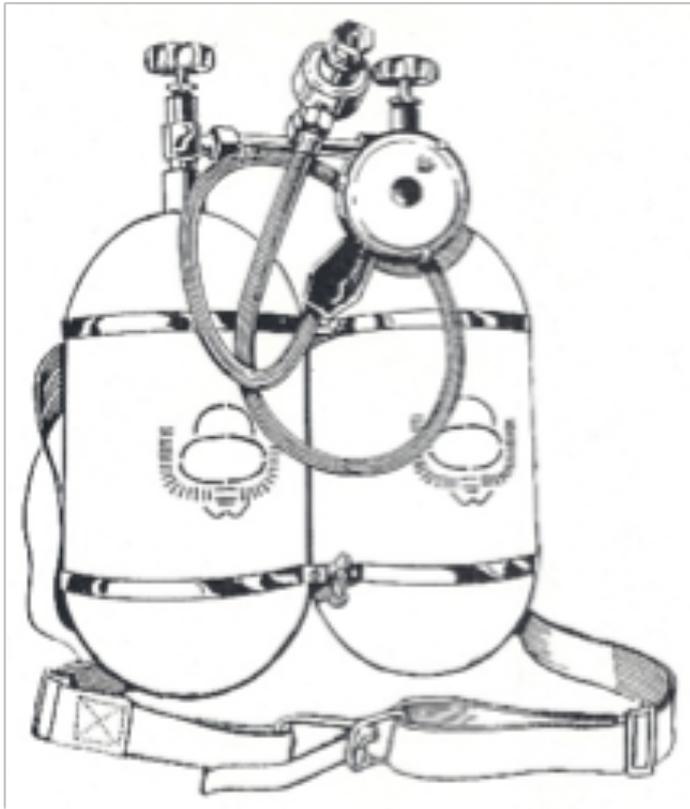


SEA HORNET DIVING EQUIPMENT

Manufactured by T.D. Preece & Co. PTY LTD

By Mel Brown



The Command Air Regulator

demand from 12 to 50mm of water for easier breathing.

Externally Adjustable "Turbo Boost" Control. Adjustable Venturi control allows you to boost a maximum quantity of air without increasing the inhalation effort.

Front Cover Ambient Ports are designed to prevent freeflow during up current swimming.

The Command Air Regulator is a high performance regulator coupled with a state of the art, balanced second stage. It is externally adjustable, both for ease of breathing as well as Venturi assist control which provides customized self tuning of air demand. Both controls are adjustable while underwater.

FEATURES

A Balanced Demand Valve System allows effortless inhalation with up to 1000 litres per minute of airflow.

Externally Adjustable Sensitivity Control adjusts the opening (breathing) effort of 2nd stage

Enlarged Exhaust Port. 20% larger exhaust port resulting in reduced exhalation effort.

Enlarged Mouthpiece Tube. 15% larger mouthpiece tube resulting in smoother breathing.

Composite Lightweight Materials. Made from two compound resins, fiberglass reinforced for maximum strength and minimum weight. Available in a range of standard and fluorescent colours.

Available with Yoke or 34 Mpa DIN fitting.

ORIGINAL OWNER LIFETIME GUARANTEE

SeaHornet

Theodore Duncan (Bob) Preece was born in Sydney's seaside suburb of Manly on the 6 May 1923. During the Second World War Bob Preece served in the Merchant Navy as a Radio Telegraph operator on board a vessel supplying Australian and American troops stationed in the South Pacific Islands. After the war Bob rented a small garage in Rolfe Street Manly and established his own business, making telegraph keys.

In 1952 Preece and Moir Engineering Co had been formed, making a range of tools for the automotive industry as well as hobby lathes. The partnership was dissolved with TD Preece & Co being registered as a company during 1954, with a move being made to newly purchased premises at 256 Condamine Street Manly Vale in 1955.

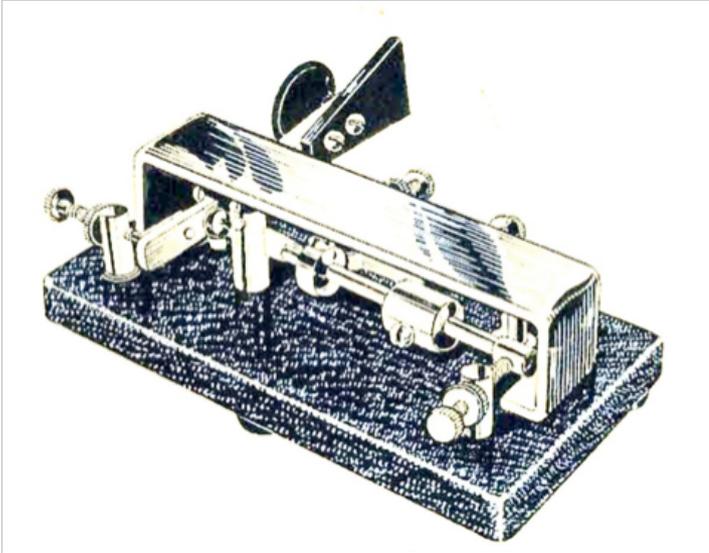
Using the brand name PREECO, the company produced a large range of precision tools for the automotive rebuilding industry, which included tension wrenches, valve lifters, timing gear, harmonic balancers and steering wheel pullers, king pin reamers and

windscreen removing fitting tools. During 1957 the Glenn range of automotive spare parts was introduced. The company also produced evaporative coolers, 5BX exercise equipment, industrial fans, and stainless-steel oars.

Bob Preece had been introduced to diving by a friend and on 1 October 1958 opened the Manly Scuba Service at his Condamine Street premises. A range of diving equipment was offered for sale as well as Scuba instruction, then in 1959 he was awarded the contract to clean, maintain and look after the Australian Navy's compressed air breathing apparatus. Later on, the Navy's equipment servicing contract was given to Phillips Diving Services who continued servicing the navy's equipment until they shut down in 1992.

In 1959, under the brand name of Sea Hornet the company made its first item of diving equipment, a two-piece hand spear made from brass tubing.

In 1960 the Sea Hornet CO2 speargun went into production. First produced with aluminium fittings, in 1963 it was changed to all brass construction.



Above: The Preece Telegraph Key. Right: Theodore Duncan 'Bob' Preece (1923 - 1987). Below: Bob Preece with his Sea Hornet scuba



In January of 1961 T.D. Preece announced their all new, all-Australian Sea Hornet aqualung with the following features - Amazing ease of breathing, long, high pressure hose ensuring unencumbered movement, simplicity of design, ease of maintenance, rugged construction, corrosion resistant finishes and materials, quick release safety belt,, and zinc sprayed cylinders.

The Sea Hornet demand valve was based on the design used in the earlier Dawson FloMatic

Scuba with the high-pressure reducer utilising a diaphragm design. A large quantity of ex WW2 26 cu.

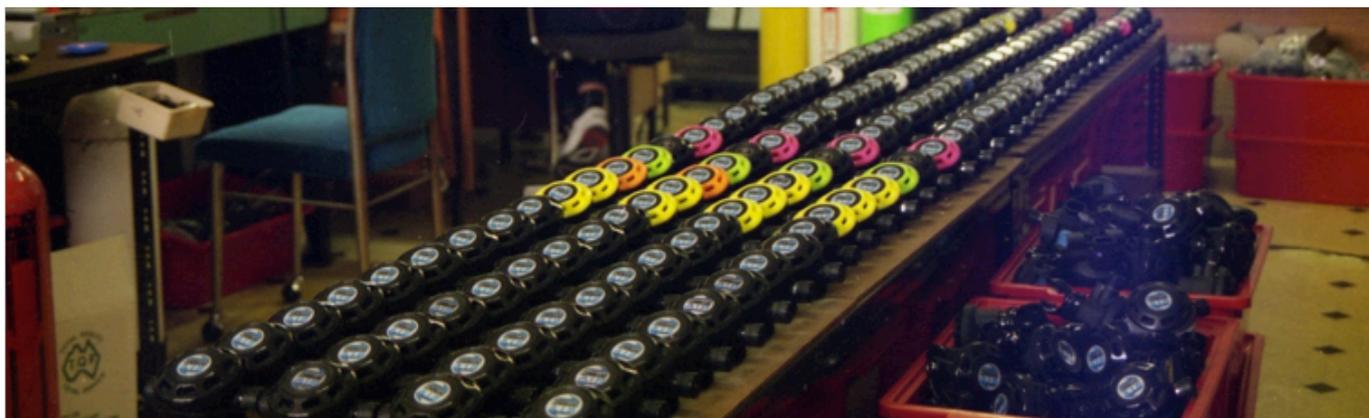
ft. nitrogen cylinders had been obtained and these had the protective wire binding removed and given a coating of zinc. These cylinders were fitted with a valve of more compact design than the medical oxygen valves that were in widespread use at that time.

In March 1961 ex-navy diver Wally Reynolds, while using Sea Hornet scuba accomplished a dive to 327 feet, about 12 miles east of Newport.

In 1962 the company announced a lung changeover plan, exchanging full bottles for empty bottles.



Above left: Three of the five CNC lathes used by T.D. Preece. Above right: Peter Katz, Sea Hornet's chief engineer from 1988 to 2003. Below:



Believing that he could make a better speargun than any currently on the market Bob turned his attention to the design and manufacture of spearguns.

In January of 1966, his first rubber Powered Speargun was introduced to the market. It was made from Tasmanian Oak and bronze coloured polypropylene fittings with a stainless-steel trigger mechanism cartridge. This speargun was later to be known as the Sportsman. In September, a tubular stainless steel speargun was introduced with black polypropylene fittings. This was later to be known as the Pacific. A succession of different models followed with the Tourist being next, using a tubular aluminium barrel and then the Premier, Recruit, Lazer, Magnum, Competition, Sea wolf and others. All were available with a range of barrel lengths and in deluxe versions.

After twelve years of concentration on the development and marketing of its speargun range, Sea Hornet re-entered the Scuba business in 1978 when it became the exclusive Australian distributor for the Sportsways Waterlung range of products.

Sportsways was founded in the USA in 1958 by Frenchman Sam Lecocq, who designed and manufactured a single hose two stage regulator he named the Waterlung. In following years, the

company's range was extended to include tank valves, depth and pressure gauges, buoyancy control vests and basic equipment.

Then Peter Katz commenced working at Sea Hornet. Born in Czechoslovakia, Peter had begun diving with a gasmask, welding gas regulator and a few small cylinders of air during 1956, later progressing to making twin hose regulators. In 1962 Peter began working at the Research Institute of Engineering Studies at the Prague Technical University, where it was possible to continue to develop regulators in his free time.

In 1969 the Sportlimex company was established making a prototype of a single hose regulator named the Tajfun. As it did not perform as expected Peter was approached to remedy its performance and was offered a position in its R&D department, which Peter accepted in 1970. During its production run some 30,000 Tajfun regulators were made.

In 1972 Sportlimex merged with Aquacentrum where Peter designed their Tornado high performance single hose regulator. In 1979 Peter, with his wife Hana, escaped communist rule in Czechoslovakia to West Germany. He arrived in Australia in 1980, and two weeks later was working at Sea Hornet.

MANLY SCUBA SERVICE
 HEADQUARTERS OF THE AUSTRALIAN SUB-AQUA CLUB
OPENING 1st OCTOBER, 1958:
 A complete Scuba Service for all Divers Spearmen and Underwater Photographers

- COMPRESSED AIR — Supplied from Special FRENCH Aqualung Compressor.
- LUNGS — Special Two Stage Self Draining Mouth Lung. Fully guaranteed for six months — PRICE £12/10/-.
 This type lung was chosen by the Speleological Society after exhaustive tests, and was used in recent underwater exploration work at the Jenolan Caves. Service to all makes of lungs.
- BOTTLES — Large quantity of new and second hand cylinders with taps from £5/10/- each. Taps £2 each.
- RUMBLING SERVICE — Any type of aqualung bottle rumbled on special two axis machine. 12/6 per bottle.
- ZINC SPRAYING — 15/- per bottle.
- EQUIPMENT — Spearguns, Masks and Flippers, etc.

MANLY SCUBA SERVICE
 265 CONDAMINE STREET, MANLY VALE
 XJ 1793 — NIGHT XF 4820
 HOURS: 8 to 5 Monday to Friday
 7 to 9 Tuesday and Thursday
 10 a.m. to 4 p.m. Saturday

STOP PRESS
 Australian Sub-Aqua Club
 A FREE DIVING SCHOOL — will be conducted at Manly Pool during October, November for beginners in the use of the aqualung.
 Enrol Now — Ring XF 4820
 L. S. TAPRELL, Secretary.

Page Eight SKIN DIVING, October, 1958



Above: Sea Hornet, Condamine Street, Manly Vale, NSW about 1966

When Peter commenced at Sea Hornet the company was servicing its imported Sportsways regulators, but had no means of testing their performance. Peter designed and constructed a test panel to measure air flow and breathing performance.

As T.D. Preece had no design office Peter left after eight months to work for PM Anderson Industries, but continued to work for T. D. Preece on a contract basis.

The first Sea Hornet regulator for twenty years, the Sea Hornet Mk1, was introduced to the market in 1981. The Mk1 first stage was designed by Peter Katz, with the second stage being a slightly modified Waterlung unit.

In partnership with Hana, Peter began assembling and testing all Sea Hornet regulators from his home. This was in 1985.

In 1988 the factory was modernised and extended with a frontage in Kenneth Road. With a design office now created within the complex, Peter began full time work with the company as Chief Engineer and was responsible for the design of all their breathing equipment until his retirement in 2003.

Early in 1987 the diving community was shocked to learn of the passing of Bob Preece. Bob had contacted a staph infection while in hospital and died on the 2 February 1987.

T.D. Preece & Co Pty Ltd continued to be managed by his wife Pam Preece (now deceased) and his three children, Kim, Glenn and Anne. The range of products became extensive in scuba, including the manufacture of high-pressure cylinder valves for

various gases, and the distribution of aluminium and steel scuba cylinders.

It also included the manufacture and supply of military scuba diving equipment for the Australia's defence forces, and a range of centrifugal blowers for the air-conditioning industry.

Kim left TDP in early 1991 and joined Uwatec AG in 1992, a Swiss dive instrument manufacturer. Glenn continued managing T.D Preece & Co Pty Ltd until early 2009 when he then purchased the company. The company eventually ran into financial difficulties and for a while was in receivership during 2009. Financial problems continued with the company premises subsequently sold to recover debts. T D Preece & C^o Pty Ltd was deregistered in September 2018. Today the company and its assets, tooling and plant still belong to Glenn Preece.

A large and diverse range of Spearfishing and scuba diving equipment was supplied under the Sea Hornet brand and it has not been possible to cover their full range of products in this review.

I have been assisted at various times by Kim and Anne Preece, Peter Katz, Steve Cross and Rod O'Brien and their assistance is gratefully acknowledged.

Mel Brown



Sea Hornet First Stages

1981 MK 1 Balanced Piston 1st Stage
Swivel head with four LP ports and two HP ports.



1984 4A C2 Balanced piston 1st stage with line pressure adjusted by internal stainless-steel shims.
Swivel head with four LP ports and two HP ports.



1986 C5 Marketed as MK 5 and Challenge 4. Balanced piston 1st stage with line pressure adjusted by internal stainless-steel shims. Has two HP ports and a Swivel head with four LP ports. Available in Chrome or Satin Chrome finish and with a Yoke or Din valve fitting and for Nitrox use.



1986 E7 Also Marketed as Explorer. It has the same internals as the MK5 but with a fixed head with 6 LP ports.



1993 C16 Made specifically for Land and Sea Sports it is the same as the C5 with a different body shape.



1994 C8 Marketed as MK1 Balanced Piston 1st stage with provision for external adjustment of line Pressure. Optional with a swivel or fixed head. Has two HP ports and a Swivel head with four LP ports. Available in Chrome or Satin Chrome finish and with a Yoke or Din valve fitting and for Nitrox use.



1995 MK 4 Dedicated Oxygen Balanced flow through piston 1st Stage Bull nose fitting to suit O2 cylinders. Has a swivel head with four LP ports and two HP ports. The Sea Hornet MK 4 is designed specifically for therapeutic diving and medical applications where 100% high pressure oxygen is required.



1996 C21 MK 6 Balanced Diaphragm 1st stage. Four LP ports with one marked R incorporating venturi assistance for the primary 2nd stage. Available in chrome or satin chrome finish and with a Yoke or Din valve fitting.



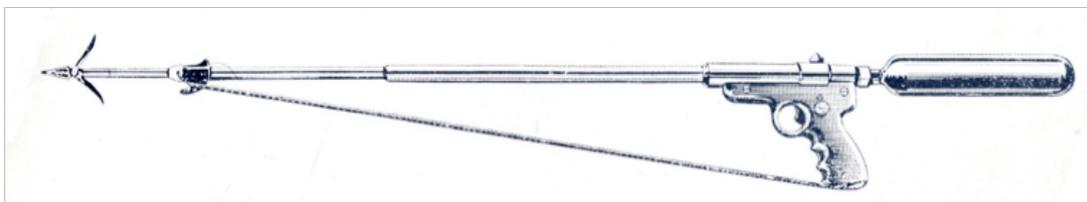
MK 6S An environmentally sealed Mk 6 1st stage.



1998 C12 MK 8 Aluminium 1st Stage
 In 1998 a small batch of a prototype 1st stage regulator was produced using a special seawater resistant alloy and these were subjected to intensive testing. As market research indicated there would only be a limited market and with the alloy to be used being very expensive it never went into production. Two HP ports and a fixed head with six LP ports.



Above: The Sea Hornet Telescopic Hand Spear, designed by John Gillies 1963.
 Below: The Sea Hornet CO2 Speargun



Sea Hornet Second Stages

1981 MK 1 DEMAND VALVE

Sold with the MK 1 1st stage the MK 1 2nd stage is a copy of Sportsways Waterlung 2nd stage differing in having a smooth finish to the outside of the housing where the Waterlung had a mottled finish and minor differences with the exhaust tee.



1982 C2 DEMAND VALVE

Modified from the MK1 in having an adjustable orifice, a new inner sleeve and a two piece forged clamp ring imported from the USA.

From 1985 used by various companies under their own banner, but with differently designed front covers. Some known companies were Atlas, Mirage, Parkway, Pro Sub, Scuba Tek, Sea Trek and Seeman Sub.



1986 C4 DEMAND VALVE

With the forged clamp rings becoming unavailable a threaded front cover and nut was introduced. Internal parts remained the same except for the introduction of a silicone diaphragm.



1987 CHALLENGE 5, EXPLORER 7

Initially the same second stage as the C4 and later with a redesigned front cover.



1990 COMMAND AIR

Following two and a half years of development and many months of field testing and with over \$100,000 invested in new tooling the Command Air was released at DEMA and met with instant acclaim which resulted in orders for over 5000 regulators in only four days.



1991 Model

1993 COMMAND AIR TURBO AND TURBO OCTOPUS

A simplified version of the Command Air which has the sensitivity control removed.



1998 COMMANDER

An improved version of the Command Air giving increased air flow (over 1000 l/min.)



2002 EXPLORER II

Features a re-designed C4 front casing to accommodate a screw in front cover. The front cover of the Explorer II was black.



EXPLORER II OCTOPUS

The Octopus was identified by having a yellow or orange front cover

HOKKAH

Specifically designed for low inlet pressures with a larger orifice and a non-return valve. The front cover of the Hookah was blue.



2003 B-COMMANDER

Produced exclusively for the RAN with about 1200 being purchased. The B Commander was classified by the RAN as the best Demand Valve able to do everything required of it.

