



*Above: Detroit electric car parked outside a building, 1919.
the attached electrical cables are visible, in use to charge the batteries*

Sources and further reading:

- (1) Detroit Electric - Powerhouse Museum <http://www.powerhousemuseum.com/collection/database/?irn=206755>
- (2) Electric Vehicles, by Nick Georgano, Shire 2008, ISBN 978-0747803164
- (3) The Electric Vehicle: Technology and Expectations in the Automobile Age, by Gijs Mom, The Johns Hopkins University Press (March 22, 2004), ISBN-13: 978-0801871382, page 212.
- (4) Electric and Hybrid Cars: A History, by Curtis D. Anderson, Judy Anderson, McFarland & Company (November 1, 2004), ISBN 978-0-7864-1872-5 <http://www.mcfarlandpub.com/book-2.php?id=978-0-7864-18>
- (5) Early Electric - Timeline, at:
<http://www.earlyelectric.com/timeline.html>
- (6) I Can Hear the Horses, by Margaret Gifford - Methuen-Haynes, North Ryde, NSW, 1983, pp.38-40
<http://catalogue.nla.gov.au/Record/2325026>
- (7) Detroit Electric resurrected as \$25,000 electric car, at:
http://news.cnet.com/8301-11128_3-10206089-54.html
- (8) Detroit Electric, at:
<http://www.detroit-electric.com>
- (9) 1916 Detroit Electric Opera Coupe - http://www.forneymuseum.org/FE_Detroit_Electric.html
- (10) Detroit Electric in West Australia, at:
http://www.vccansw.org/articles/vcca_article09.htm
- (11) Detroit Electric - http://en.wikipedia.org/wiki/Detroit_Electric
- (12) Electric vehicles - http://en.wikipedia.org/wiki/Electric_vehicles
- (13) Powerhouse Museum <http://www.powerhousemuseum.com/>

The National Electric Vehicle Festival is organised by Canberra EV and the Australian Electric Vehicles Association (AEVA) at <http://aeva.asn.au/>

The Detroit Electric

The National Electric Vehicle Festival will be held on Sunday 4 October 2009, from 9:00 am to 4:00 pm at the grounds of the Old Parliament House Lawns in Canberra.

On display at the festival will be a 1917 Detroit Electric Brougham. This vintage vehicle was used by the Allen family in Sydney for over 30 years until presented to the Powerhouse Museum in 1947.



During World War I, the cost of petrol doubled in Australia, contributing to the popularity of electric cars. In 1916, the Sydney City Council set up a special charging station in Palmer Street, where owners could recharge their vehicles for a reasonable fee. At the time it was expected that the petrol engine would soon become obsolete, quotes the Powerhouse Museum's website.⁽¹⁾

Production of the Detroit Electric began in 1907. The car's range between battery recharging was about 130 km (80 miles), though on a company-sponsored test in 1913 one covered a distance of 340 km (211.3 miles) on a single charge.⁽²⁾

The range depended on what battery came with the car. The standard Detroit Electric was powered by a rechargeable lead acid battery, which performed brilliantly in cold weather (see ad at bottom). From 1911 to 1916, for an additional \$600, an Edison nickel-iron battery was available that was more resistant to high temperatures, had a longer life span and could be recharged faster.⁽³⁾

Specifications of featured model

Motor: 80 volt, 10 hp (7.5 kW)

Motor No: 16770, Class G, Size 80

Steering: lever

Battery: 42 cells, 15 plates

Speed: 30 mph (48 kph)

Gears: 5 forward, 5 reverse,

Final drive: shaft and bevel gears

Brakes: internal expanding on both rear wheels plus magnetic controller

In 1916 close to 2000 Detroit Electric cars were produced and some 1,500 employees worked on a 21-acre (8.5 ha) factory floor. The Detroit Electric cars were renowned for their quality coachwork, safety, dependability and convenience.⁽¹⁾

The Detroit Electric was often preferred by women drivers as it did not have to be started with a starter handle and it did not produce the noise and the fumes of petrol cars. In advertising the Detroit Electric was described as *"elegant comfort and independent privacy"* and *"Society's Town Car"*. It was seen as a luxury vehicle for shopping and social visits around town. Top speed was not an issue at the time for cars that were only meant to be used in urban areas.

At the time, sellers touted the electric car's easy operation and maintenance, pointing out that electric cars were *"safe, silent and free from offensive odors, smoke and grease"*. One electric car manufacturer praised the electric motor as *"clean, silent, free from vibrations, thoroughly reliable, easy of control, and produces no dirt or odor"*.⁽⁴⁾

Henry Ford purchased a Detroit Electric in 1908, the same year he began production of the Model T Ford. Ford bought a further one in 1910 and another one in 1914.

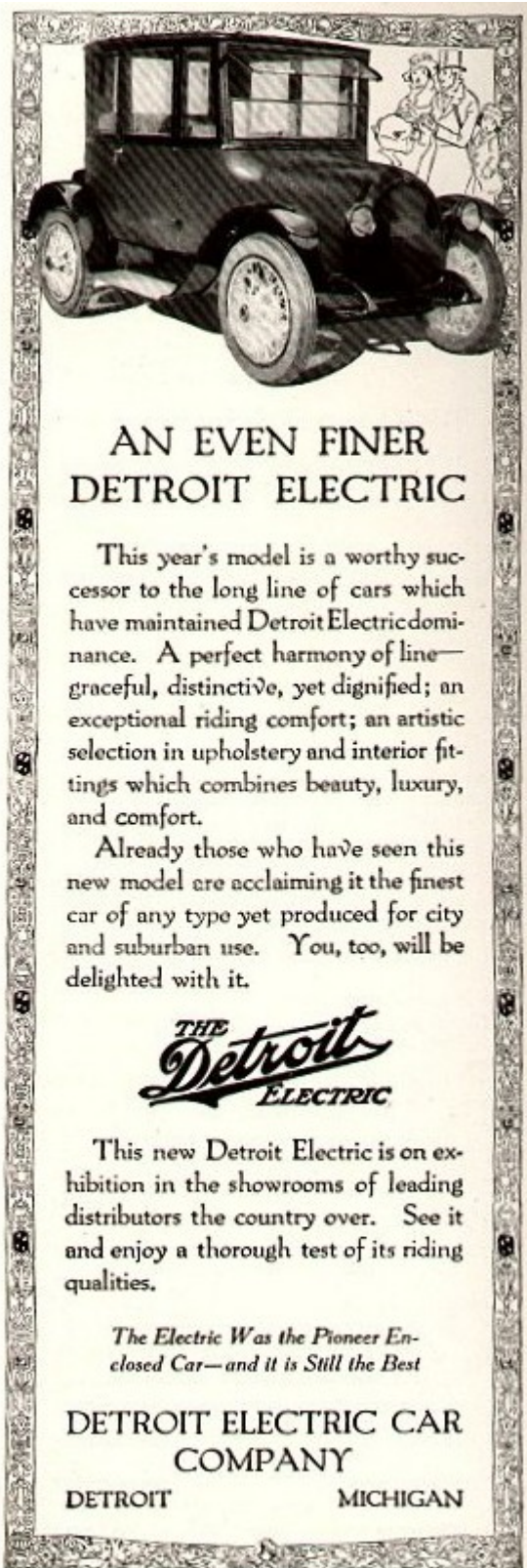
Another notable Detroit Electric owner was Thomas Edison, pictured below with his Detroit Electric model 47.⁽⁵⁾

The Detroit Electric model that will be on display at the festival is one of a number owned by the Sydney solicitor, Arthur Wigram Allen (1862-1941), who was a partner in the well-known firm of Allen, Allen & Hemsley of Wigram House, 19 Castlereagh Street, Sydney.

In 1917 the horse-drawn vehicle manufacturers, Angus & Son, of 165 & 167 Castlereagh Street, Sydney, advertised that they were agents for the Detroit Electric car. Allen may have ordered his cars from them. One of their advertisements from 1917 said *"The Coming Car is Electric. The Best Electric Car is the Detroit. In the nature of things petrol must become scarce and dear. Every day electricity becomes more plentiful and cheaper. Electric cars are Cheaper to Operate, More Durable, Easier to Drive, More Comfortable to Travel in; and, above all, SAFER."*

Arthur Allen lived at "Merioola", a mansion in Edgecliff Road, Edgecliff, in the Eastern Suburbs of Sydney and purchased his first Detroit Electric in about 1917. During the First World War petrol was in short supply and an electric car appeared to be the family's answer for short trips. The range of travel for one charge of the battery was at least 40 miles (64 km), a round trip from the Allen's Edgecliff home to a holiday house, "Moombara" on the Port Hacking River in Sydney's southern suburbs.

Arthur Allen had never driven a petrol car, but quickly mastered the electric one. His daughters, Joyce and Margaret, both in their twenties, also learnt to drive it. At this time the self starter on petrol cars was still unreliable and swinging the external starter handles was both dangerous and heavy work. The electric car had the advantage of having no starting problems and both passengers and driver were protected from the weather behind the large glass windows, which gave excellent visibility. In those days the petrol car was either an open tourer or a closed limousine with the driver sitting exposed to the elements. Another advantage of the Detroit was that the doors could be locked, so coats and parcels could be left in safety.



AN EVEN FINER
DETROIT ELECTRIC

This year's model is a worthy successor to the long line of cars which have maintained Detroit Electric dominance. A perfect harmony of line—graceful, distinctive, yet dignified; an exceptional riding comfort; an artistic selection in upholstery and interior fittings which combines beauty, luxury, and comfort.

Already those who have seen this new model are acclaiming it the finest car of any type yet produced for city and suburban use. You, too, will be delighted with it.

*THE
Detroit
ELECTRIC*

This new Detroit Electric is on exhibition in the showrooms of leading distributors the country over. See it and enjoy a thorough test of its riding qualities.

The Electric Was the Pioneer Enclosed Car—and it is Still the Best

DETROIT ELECTRIC CAR
COMPANY
DETROIT MICHIGAN

Detroit Electric ad from 1920 magazine

The Allens liked their electric car so much that they bought a second and then a third one. For the privileged Allen girls this meant freedom and independence, unusual at the time, to attend parties and dances without the need for parents or chauffeurs collecting them long before they wanted to go home. So Margaret Allen would fill the car with friends and drive them all home.



Margaret recalls in her book *"I Can Hear the Horses"* that the control lever was pushed forward through five notches. On number 1, the wheels just moved, and on number 5 it was full speed ahead, or about 30 mph (48.3 kph) on level ground. The car slowed considerably on hills, but, once over the top, the lever was pulled back and the very heavy car free-wheeled downhill at a tremendous pace. *"The power in the batteries lasted for about 40 miles, so nearly every night the car was plugged into a charger. This was a terrifying machine, and I never lost my fear of it. One stood on a rubber mat, and twiddled two knobs on the switch board. At the back of this was a large glass valve or tube, bigger than a football and with an alarming hiss, this sprang to life and was filled with a dancing blue light. The car remained on charge all night, and was ready for the road in the morning."*

Arthur Allen eventually owned five or six Detroit Electric cars. His friends who had bought them during the war sold them to him when petrol cars improved, so he had a couple kept for spare parts. New batteries became hard to get, and soon Arthur Allen and his brother Reggie were the only people who drove them. Arthur Allen became a familiar figure on Sydney streets, sitting in the traffic among the "modern" cars. He drove it every day until his death in 1941. With petrol again in short supply during the Second World War, the last of the Detroit Electrics was driven by Arthur's son, Arthur Denis Wigram Allen (1894-1967), known as Denis. He was also a solicitor in the family firm, then located in Martin Place, and drove the car to work in the city. In 1947 he presented it to the Powerhouse Museum and according to his sister, Margaret, drove the car into the Museum himself whereupon the floorboards apparently broke under its weight.⁽⁶⁾



On March 31, 2009, Detroit Electric was scheduled to be reincarnated as an affordable electric car, to become available worldwide by the end of 2010 through its partnership with Proton.⁽⁷⁾ The e63 (pictured right) features a 25kWh Lithium Ion Polymer battery, that can be fully recharged at 13Amp in 8 hours, or at 32Amp in under 3.2 hours, while it can be part-charged to 90% DOC in 20 mins (Fast Charging). The battery can be charged over 2000 cycles and the car has an estimated range of 180km (112 miles) on a fully charged battery. Top speed is 180 kmh (112 mph) and acceleration from 0 to 100kmh (62 mph) is less than 8 seconds.⁽⁸⁾

