

# SNJ-3

## North American

# TEXAN

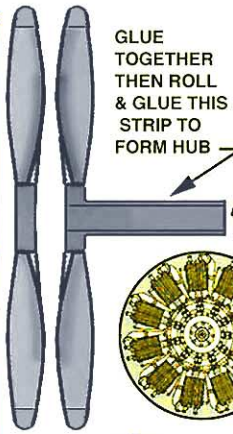
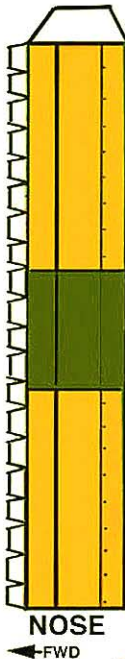
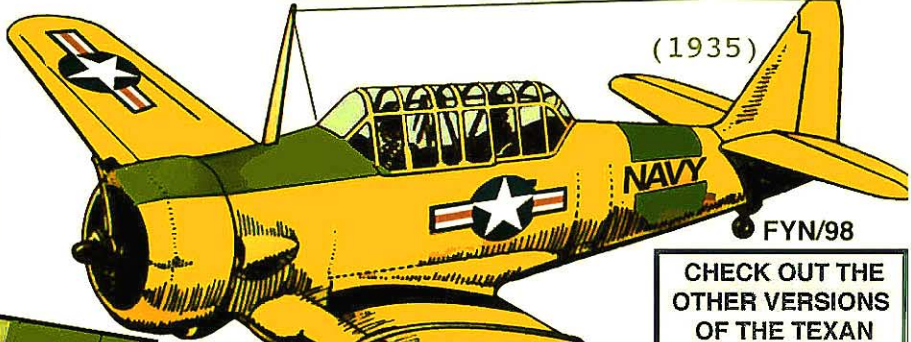
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(1935)

FYN/98

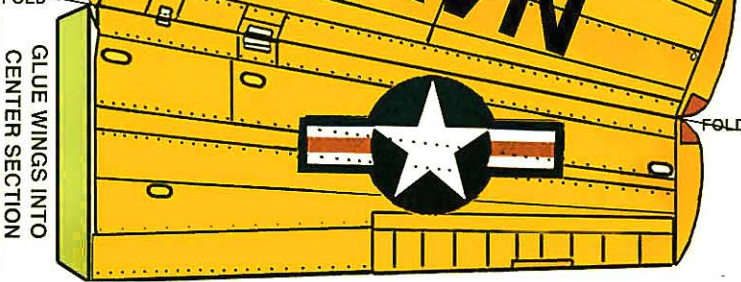
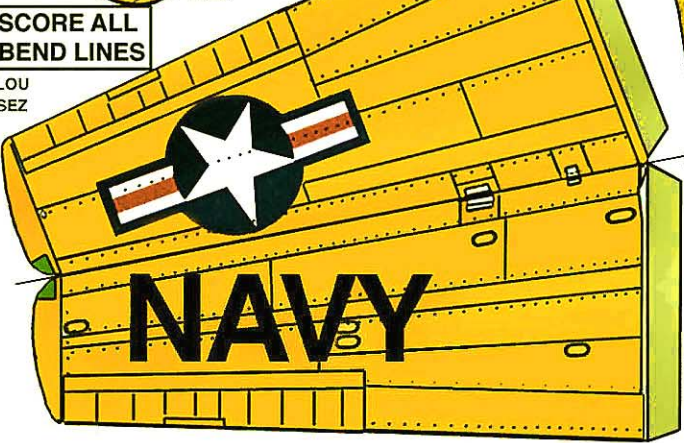
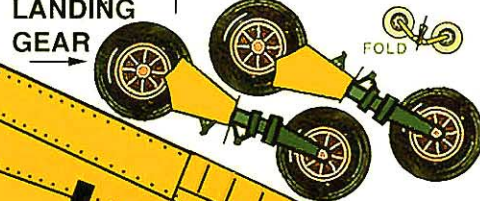
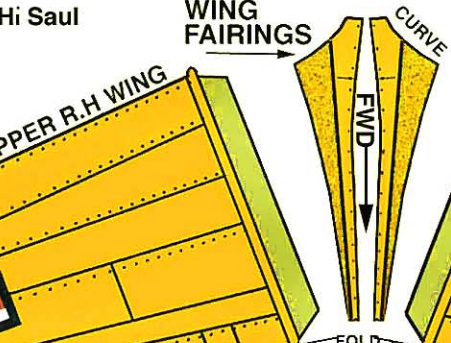
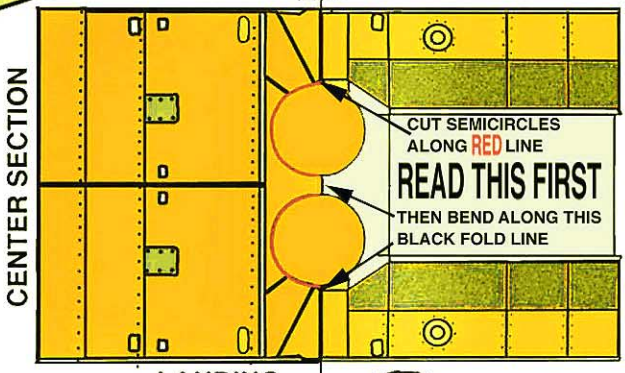
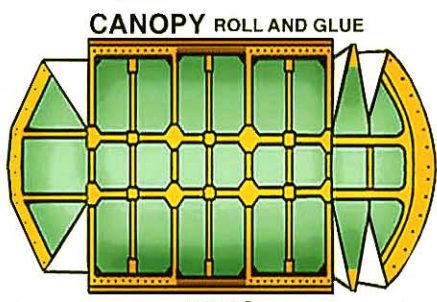
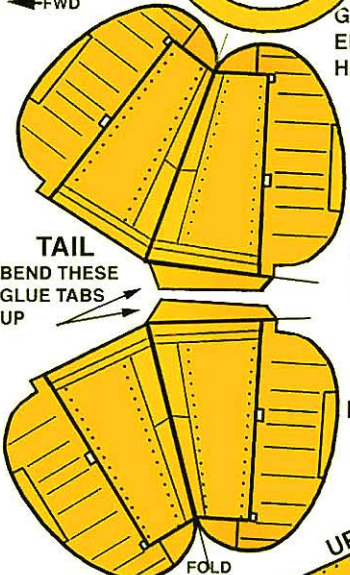
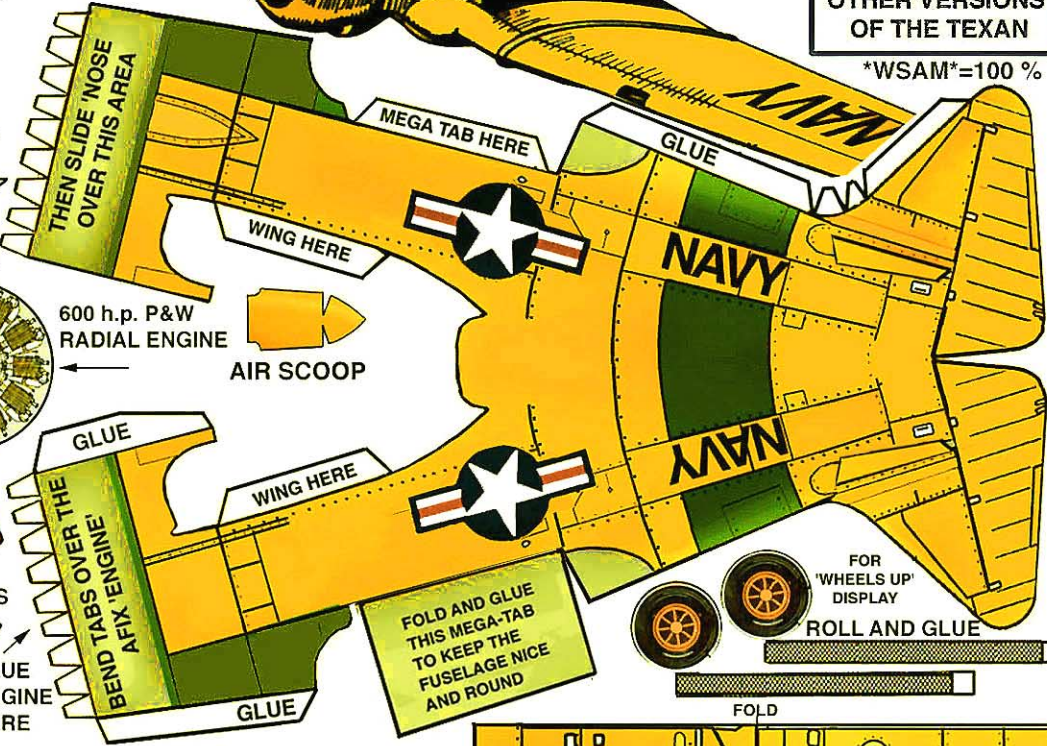
CHECK OUT THE  
OTHER VERSIONS  
OF THE TEXAN

\*WSAM\*=100 %



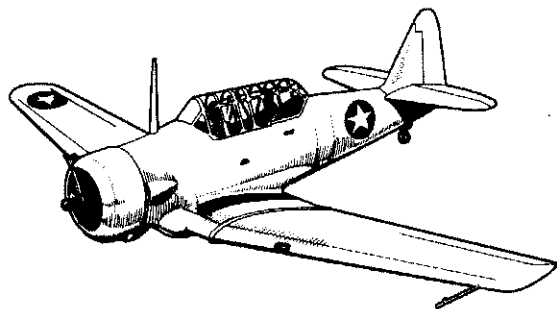
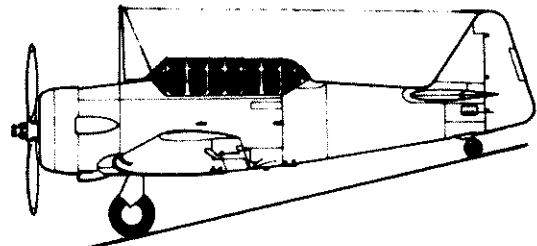
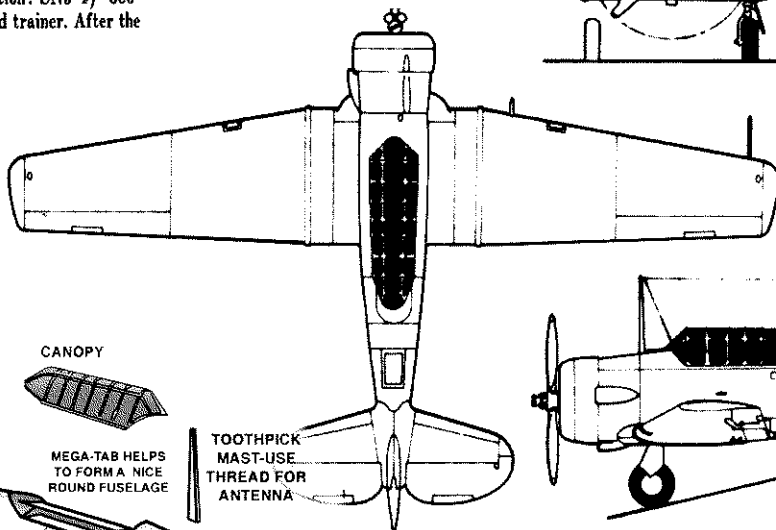
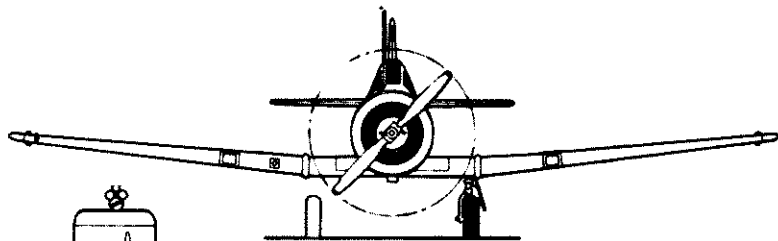
600 h.p. P&W  
RADIAL ENGINE

AIR SCOOP



# North American AT-6 TEXAN-HARVARD

NORTH AMERICAN AT-6 (Navy designation: SNJ-4) 600-h.p. P. & W. radial. Widely used advanced trainer. After the war, classed as a primary trainer.



## Specification

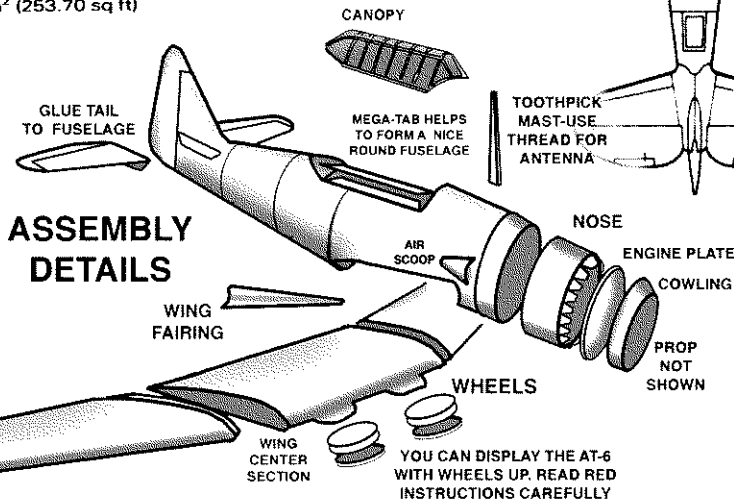
### North American SNJ-5

**Type:** two-seat advanced trainer  
**Powerplant:** one 410-kW (550-hp) Pratt & Whitney R-1340-AN-1 radial piston engine

**Performance:** maximum speed 330 km/h (205 mph) at 1525 m (5,000 ft); service ceiling 6555 m (21,500 ft); range 1207 km (750 miles)

**Weights:** empty 1886 kg (4,158 lb); maximum take-off 2404 kg (5,300 lb)

**Dimensions:** span 12.81 m (42 ft 0 1/4 in); length 8.99 m (29 ft 6 in); height 3.58 m (11 ft 9 in); wing area 23.57 m<sup>2</sup> (253.70 sq ft)



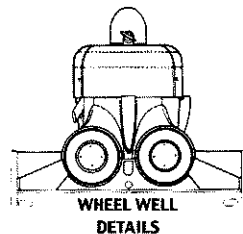
Almost certainly the most extensively used trainer of all time, with more than 17,000 built by North American, the **Harvard** was derived from the **North American NA-16** prototype first flown in April 1935. A cantilever low-wing monoplane with fixed tailwheel landing gear, open cockpits in tandem and power provided by a 298-kW (400-hp) Wright R-975 Whirlwind radial engine, the type after official testing received a production order under the designation **BT-9**. Modifications were specified in the contract, the most important being enclosed cockpits, and the resulting pre-production **NA-18** incorporated the changes and was powered by a 447-kW (600-hp) Pratt & Whitney R-1340 Wasp engine. However, the Wright R-975 engine was retained for production aircraft, the **BT-9** (42 built) being followed by the **BT-9A** (40) which introduced two 7.62 mm (0.3-in) machine-guns, by the **BT-9B** (117) with detail improvements, and by the similar **BT-9C** (67) with some equipment changes. A single **BT-9D**, with revisions of the outer wing panels and rudder, led to the improved **BT-14** (251 built) which introduced a metal-covered fuselage and the 336-kW (450-hp) Pratt & Whitney R-985-25 Wasp Junior engine; in 1941 27 were re-engined with 298-kW (400-hp) R-985-11 engines, and were redesignated **BT-14A**. The US Navy also operated 40 examples of the **BT-9** under the designation **NJ-1**, these having the R-1340 Wasp engine. Export orders for these fixed landing gear versions included one for Australia, which served as a pattern aircraft for production by Commonwealth Aircraft Corporation, China (85), Honduras (3), and licence-holding Japan and Sweden (two pattern aircraft each). France received 230 aircraft similar to the **BT-9**, for service with the air force (200) and navy (30), but only 111 of a similar order for **BT-14**s had been delivered at the time of the French collapse; the balance of 119 was acquired by the UK, then being supplied to the RCAF, which designated them **Yale Mk I**.

The requirement for a basic combat trainer led to development of the **NA-26**, a version of the **NA-16** introducing retractable tailwheel landing gear, the 447-kW (600-hp) R-1340 engine, and equipment representative of contemporary operational types. Production versions included the **BC-1** (177), of which 30 were modified as **BC-11** instrument trainers; the **BC-1A** (93) with airframe revisions; and a single **BC-1B** with a modified wing centre-section. A change of role to advanced trainer brought new designations, first as the **AT-6 Texan** (94) which differed little from the **BC-1A**. Subsequent versions included the **AT-6A** (1,847) with the R-1340-49 engine and revised fuel tanks, the **AT-6B** (400) gunnery trainer, the **AT-6C** (2,970) and **AT-6D** (4,388) which had revised structure to economise on light alloys, and the **AT-6F** (956) with strengthened airframe. The US Navy also used the type extensively, following the **NJ-1** with the **SNJ-1** (16 similar to the **BC-1** but with metal-covered fuselage), **SNJ-2** (61) with R-1340-56 engine, **SNJ-4** (2,400) and **SNJ-5** (1,357) equivalent to **AT-6C** and **AT-6D**, and **SNJ-6** comprising 931 of the US Army's 956 **AT-6**Fs which had been procured for the US Navy. The designation **SNJ-5C** applied to **SNJ-5**s equipped with arrester hooks for deck-landing training.

In June 1938 the UK ordered 200 **BC-1**s, designating them **Harvard Mk I**, these representing the first of more than 5,000 delivered, mostly under Lend-Lease, to Commonwealth air forces. Most of the first 200 **Harvard Mk I**s were shipped to Southern Rhodesia for inception of the Commonwealth Air Training Plan, but the RAF retained almost all of a second batch of 200. After 30 similar aircraft were acquired for the RCAF, 600 equivalent to the **AT-6** were procured as **Harvard Mk II** and distributed to the RAF (20) and **RNZAF** (67), the remainder being allocated to Canada for use in its contribution to the Air Training Plan. In addition to the **Harvard Mk I** and II, **Harvard Mk III** aircraft were

acquired, equivalent respectively to the **AT-6C** and **AT-6D**; the designation **Harvard Mk IIB** applied to 2,610 built as **AT-16** aircraft by Noorduyn Aviation Ltd in Montreal, for use by the RAF and RCAF, and corresponding to the **AT-6A**. In 1946 this company was taken over by Canadian Car and Foundry, which built for the RCAF 270 **Harvard Mk 4** trainers to T-6G standard and 285 similar aircraft with the designation **T-6J** for the USAF Mutual Aid Program.

From 1949, 2,068 T-6 aircraft of different versions were rebuilt under the designation **T-6G**, introducing the R-1340-AN-1 engine, increased fuel capacity, improved cockpit layout, a steerable tailwheel and other improvements. These entered service with the US Air Force and US Navy, and during the Korean War 97 were modified to **LT-6G** configuration for deployment in battlefield surveillance and FAC roles. In addition to Texans exported to Brazil, China and Venezuela, many other air arms received surplus aircraft from RAF, RCAF and USAAF stocks.



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