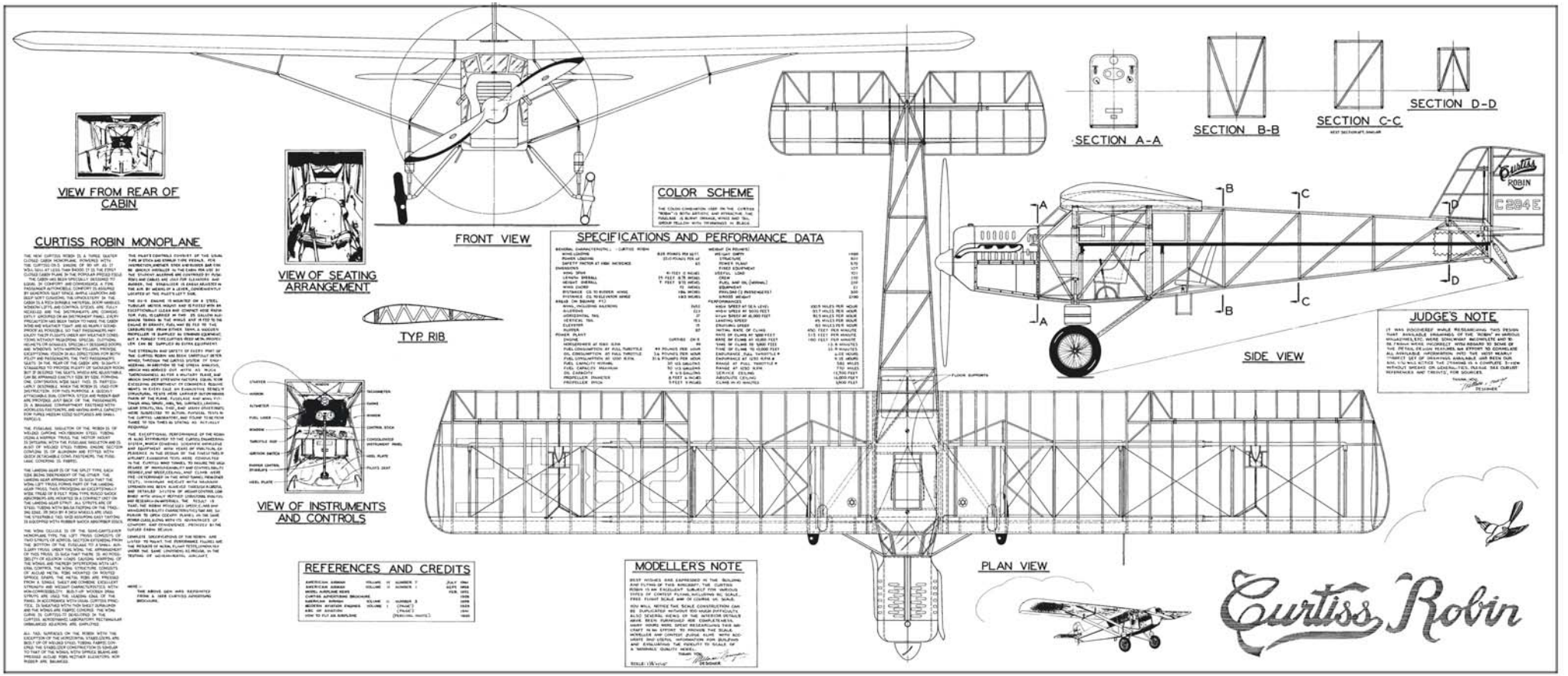

CURTISS ROBIN MONOPLANE

THE NEW CURTISS ROBIN IS A THREE QUARTER CLOSED CABIN MONOPLANE, POWERED WITH THE CURTISS OX-5 ENGINE OF 90 HP AT 1[illegible] R.P.M. AT LESS THAN PAGES IT IS THE FIRST CLOSED CABIN PLANE IN THE POPULAR PRICED FIELD.

THE CABIN HAS BEEN SPECIALLY DESIGNED TO EQUAL IN COMFORT AND CONVENIENCE A FINE PASSENGER AUTOMOBILE. COMFORT IS ASSURED BY SUCH FEATURES AS: SINGLE LEATHER AND [illegible] SEATS, ADJUSTABLE TO ANY POSITION. THE CABIN IS A FIRM DURABLE MATERIAL, DOOR HANDLES, WINDOW LIFTS, AND CONTROL STICKS ARE FULLY HEADLESS AND THE INSTRUMENTS ARE CHANGED EXTRA ORDERED ON AN INSTRUMENT PANEL. EVERY PRECAUTION HAS BEEN TAKEN TO MAKE THE CABIN WIND AND WEATHER TIGHT AND AS NEARLY SOUND PROOF AS POSSIBLE. THE CABIN ENABLES PILOTS EASILY TAKE FLIGHTS UNDER ANY WEATHER CONDITIONS WITHOUT REQUIRING SPECIAL CLOTHING, HELMETS OR GOGGLES. SPECIALLY DESIGNED DOORS AND WINDOWS, WITH NARROW PILLARS, PROVIDE EXCEPTIONAL VISION IN ALL DIRECTIONS FOR BOTH PILOT AND PASSENGERS. THE TWO PASSENGERS SEATS ARE ON A SEAT, WHICH IS ADJUSTABLE AND STANDARDIZED TO PROVIDE PLENTY OF SHOULDER ROOM BUT IF DESIRED THE SEATS, WHICH ARE ADJUSTABLE, CAN BE APPROACHED EASILY FROM EITHER SIDE. FOR ONE CONTRAVENTION WITH THAT THIS IS PARTICULARLY DESIRABLE, WHEN THE ROBIN IS USED FOR INSTRUCTION. FOR THIS PURPOSE A SECOND INSTRUMENT PANEL IS PROVIDED, WHICH IS SUPPLIED AFTER PROVIDED JUST BACK OF THE PASSENGERS. IS A BAGGAGE COMPARTMENT FASTENED WITH HOOKLESS FASTENERS, AND HAVING AMPLE CAPACITY FOR THREE MEDIUM SIZED SUITCASES AND SMALL PARCELS.

THE FUSELAGE, SOLUTION OF THE ROBIN IS OF WELDED CURTISS HIGH TENSION STEEL TUBING. THE WINGS, TRUSS, THE WINGS, HOOKED IN DIRECTLY WITH THE FUSELAGE SOLUTION AND IS ALSO OF WELDED STEEL TUBING. ENGINE SECTION COWLING IS OF ALUMINUM AND FITTED WITH QUICK DETACHABLE COWL FASTENERS. THE FUSELAGE COVERING IS FABRIC.

THE LANDING GEAR IS OF THE SPLIT TYPE, EACH SIDE BEING INDEPENDENT OF THE OTHER. THE LANDING GEAR ARRANGEMENT IS SUCH THAT THE WING LIFT TRUSS FORMS PART OF THE LANDING GEAR TRUSS, THUS PROVIDING AN EXCEPTIONALLY WIDE TREAD OF 9 FEET. FOUR TYPE RUBCO SHOCK ABSORBERS ARE MOUNTED IN A COMPACT UNIT ON EACH SIDE OF THE FUSELAGE. THE WHEELS ARE STEEL TUBING WITH BALLOON TYRES ON THE TREADING EDGE. ON BOTH OF A DISC WHEELS ARE USED. THE STEERABLE TAIL SKID ASSUMING EASY TURNING IS ACCEPTED WITH RUBBER SHOCK ABSORBER DISCS.

THE WING COLLOCE IS OF THE SEMI-CANTILEVER MONOPLANE TYPE. THE LIFT TRUSS CONSISTS OF TWO SPRUCE OR ALUMINUM SECTION EXTENDED FROM THE WING TIP TO THE FUSELAGE. THE WING LIFT TRUSS FORMS PART OF THE LANDING GEAR TRUSS. UNDER THE NORMAL THE APPRAISAL OF THIS TRUSS IS SUCH THAT THERE IS NO POSSIBILITY OF ALLOWING LOADS CAUSING WARPING OF THE WINGS AND THEREBY INTERFERING WITH LATERAL CONTROL. THE WING STRUCTURE CONSISTS OF ALCLAD METAL RIBS MOUNTED ON ROUTED SPRUCE SPARS. THE RIBS ARE STAMPED OUT FROM A SINGLE SHEET AND COMBINE EXCELLENT STRENGTH AND WEIGHT CHARACTERISTICS WITH NON-CORROSIBILITY. BUILT-UP WOODEN RIBS STRUTS ARE USED THE LEADING EDGE OF THE PANEL IN ACCORDANCE WITH USUAL CURTISS PRACTICE. IS SHEATHED WITH THIN SHEET DURALUMIN WHICH IS ALSO STAMPED OUT WITH AN AUTOMATIC CURVE. IS CURTISS-IT DEVELOPED BY THE CURTISS AERONAUTICAL LABORATORY. RECTANGULAR DIMENSIONED SOLUTIONS ARE EMPLOYED.

ALL TAIL SURFACES ON THE ROBIN WITH THE EXCEPTION OF THE HORIZONTAL STABILIZERS ARE BUILT UP WITH SPRUCE SPARS AND RIBS. THE STABILIZER CONSTRUCTION IS SIMILAR TO THAT OF THE WINGS WITH SPRUCE SUBSPARS PRESSED ALCLAD RIBS. RUDDER AND ELEVATOR, ROD RUDDER ARE BALANCED.

THE PILOT'S CONTROLS CONSIST OF THE USUAL TYPE STICK AND RUDDER TYPE PEDALS. FOR INSTRUCTION, ANOTHER STICK AND RUDDER BAR THE REMOVED PEDALS IN THE CABIN FOR USE BY THE STUDENT. BRAKES ARE CONTROLLED BY PUSH RODS AND CABLES ARE USED FOR ELEVATORS AND RUDDER. THE STABILIZER IS EASILY ADJUSTED IN THE AIR BY MEANS OF A LEVER, CONVENIENTLY LOCATED BY THE PILOT'S LEFT SIDE.

THE OX-5 ENGINE IS MOUNTED ON A STEEL TUBULAR MOTOR MOUNT AND IS FITTED WITH AN EXCEPTIONALLY CLEAN AND COMPACT HOOD FROM TOP. FUEL IS CARRIED IN TWO 25 GALLON SUPPLY TANKS, ONE ON EACH SIDE OF THE CABIN. THE ENGINE IS ADEQUATE. FUEL MAY BE FED TO THE CARBURETOR FROM EITHER TANK. A WOODEN PROPELLER IS SUPPLIED AS STANDARD EQUIPMENT BUT A FORGED TYPE CURTISS REED METAL PROPELLER CAN BE SUPPLIED AS EXTRA EQUIPMENT.

THE STRENGTH AND SAFETY OF EVERY PART OF THE CURTISS ROBIN HAS BEEN CAREFULLY DETERMINED, THROUGH THE CURTISS SYSTEM OF THEORETICAL, IN ADDITION TO THE STRESS ANALYSIS, WHICH HAS BEEN CARRIED OUT WITH AS MUCH THOROUGHNESS AS FOR A MILITARY PLANE, AND WHICH SHOWED SAFETY FACTORS EQUAL TO OR EXCEEDING THOSE OF MILITARY PLANES, ALL PARTS IN EVERY CASE, BY EXHAUSTIVE TESTS, STRUCTURAL TESTS WERE CARRIED OUT WITH WINGS PARTS OF THE PLANE, FUSELAGE AND WING FITTINGS, WING SPARS, RIBS, TAIL SURFACES, LANDING GEAR STRUTS, TAIL SKID, AND ARMY CONTROLS WERE SUBJECTED TO ACTUAL PHYSICAL TESTS IN THE CURTISS LABORATORY, AND FOUND TO BE FROM THREE TO TEN TIMES IN STRENGTH AS ACTUALLY REQUIRED.

THE EXCEPTIONAL PERFORMANCE OF THE ROBIN IS ALSO ATTRIBUTED TO THE CURTISS ENGINEERING SYSTEM, WHICH COMBINES SCIENTIFIC KNOWLEDGE WITH PRACTICAL EXPERIENCE. THE ROBIN HAS BEEN PLEASURE IN THE DESIGN OF THE FIRST FIELD AIRPLANE. EXHAUSTIVE TESTS WERE CONDUCTED IN THE CURTISS WIND TUNNEL TO INSURE THE IDEAL DEGREE OF MANEUVERABILITY AND CONTROLABILITY, PROPER LAND BREEZE LOADING, AND CLIMB WERE PRE-DETERMINED IN THE WIND TUNNEL PRIOR TO TESTS. MAXIMUM WEIGHT WITH MAXIMUM STRENGTH HAS BEEN ACHIEVED THROUGH A DEEPLY STUDY OF THE ROBIN. THE ROBIN HAS BEEN MADE WITH ABSOLUTE REPUTATION CONDITIONS, ANALYSIS AND RESEARCH IN MATERIALS. THE RESULT IS THAT THE ROBIN HIGH LEVEL SPEED, AND ITS MANEUVERABILITY CHARACTERISTICS THAT ARE SUPERIOR TO OPEN COCKPIT PLANES, ON THE SAME POWER CLASS, ALONG WITH ITS ADVANTAGES OF COMFORT AND CONVENIENCE, PROVIDED BY THE CURTISS CABIN ROBIN.

COMPLETE DESCRIPTIONS OF THE ROBIN ARE LISTED TO PROVIDE THE PERFORMANCE FIGURES ARE THE PRESENT OF ACTUAL FLIGHT TESTS, LONDON ALL UNDER THE SAME CONDITIONS, AS PRIOR, IN THE TESTING OF MODERN PLANES. AIRCRAFT.

NOTE:— THE ABOVE DATA WAS REPRINTED FROM A 1929 CURTISS ADVERTISING BROCHURE.

COLOR SCHEME

THE COLOR COMBINATION USED ON THE CURTISS "ROBIN" IS BOTH ARTISTIC AND ATTRACTIVE. THE FUSELAGE IS BURNT ORANGE, WINGS AND TAIL GREEN YELLOW WITH TRIMMINGS IN BLACK.

SPECIFICATIONS AND PERFORMANCE DATA

GENERAL CHARACTERISTICS: — CURTISS ROBIN	
WING LOADING	8.28 POUNDS PER SQ.FT.
POWER LOADING	22.0 POUNDS PER HP
SAFETY FACTOR AT MAX. INCIDENCE	8.5
DIMENSIONS	
WING SPAN	41 FEET 0 INCHES
LENGTH OVERALL	25 FEET 6.75 INCHES
HEIGHT OVERALL	7 FEET 9.75 INCHES
WING CHORD	66 INCHES
DISTANCE C.G. TO RUDDER HINGE	156 INCHES
DISTANCE C.G. TO ELEVATOR HINGE	183 INCHES
WEIGHT (IN POUNDS, ETC)	
WING, INCLUDING AILERONS	[illegible]
AILERONS	[illegible]
HORIZONTAL TAIL	[illegible]
VERTICAL TAIL	[illegible]
ELEVATOR	[illegible]
RUDDER	[illegible]
POWER PLANT	
ENGINE	CURTISS OX-5
HORSEPOWER AT 1000 R.P.M.	90
FUEL CONSUMPTION AT FULL THROTTLE	9.9 POUNDS PER HOUR
OIL CONSUMPTION AT FULL THROTTLE	1.6 POUNDS PER HOUR
FUEL CONSUMPTION AT 1000 R.P.M.	3.6 POUNDS PER HOUR
FUEL CAPACITY NORMAL	50 US GALLONS
FUEL CAPACITY MAXIMUM	50 US GALLONS
OIL CAPACITY	8 US GALLONS
PROPELLER DIAMETER	8 FEET 6 INCHES
PROPELLER PITCH	5 FEET 9 INCHES
WEIGHT (IN POUNDS)	
WEIGHT EMPTY	[illegible]
STRUCTURE	[illegible]
POWER PLANT	[illegible]
FIXED EQUIPMENT	[illegible]
USEFUL LOAD	[illegible]
CREW	[illegible]
FUEL AND OIL (NORMAL)	[illegible]
EQUIPMENT	[illegible]
PAYLOAD (2 PASSENGERS)	[illegible]
GROSS WEIGHT	[illegible]
PERFORMANCE	
HIGH SPEED AT SEA LEVEL	[illegible] MILES PER HOUR
HIGH SPEED AT 5000 FEET	[illegible] MILES PER HOUR
HIGH SPEED AT 10,000 FEET	[illegible] MILES PER HOUR
LANDING SPEED	[illegible] MILES PER HOUR
STALLING SPEED	[illegible] MILES PER HOUR
RATE OF CLIMB	[illegible] FEET PER MINUTE
RATE OF CLIMB AT 5000 FEET	[illegible] FEET PER MINUTE
RATE OF CLIMB AT 10,000 FEET	[illegible] FEET PER MINUTE
TIME OF CLIMB TO 5,000 FEET	[illegible] MINUTES
TIME OF CLIMB TO 10,000 FEET	[illegible] MINUTES
ENDURANCE FULL THROTTLE #	[illegible] HOURS
ENDURANCE AT 1250 R.P.M. #	[illegible] HOURS
RANGE AT FULL THROTTLE #	[illegible] MILES
RANGE AT 1250 R.P.M.	[illegible] MILES
SERVICE CEILING	[illegible] FEET
ABSOLUTE CEILING	[illegible] FEET
CLIMB IN 10 MINUTES	[illegible] FEET

JUDGE'S NOTE

IT WAS DISCOVERED WHILE RESEARCHING THIS DESIGN THAT AVAILABLE DRAWINGS OF THE "ROBIN" IN VARIOUS MAGAZINES, ETC. WERE SOMEWHAT INCOMPLETE AND TO THE PRESENT WRITER, INCORRECT. WITH REGARD TO SOME OF THE PRESENT DESIGN FEATURES, AN EFFORT TO CORRELATE ALL AVAILABLE INFORMATION INTO THE MOST NEARLY PERFECT SET OF DRAWINGS AVAILABLE HAS BEEN OUR AIM. THE ROBIN IS A VERY ATTRACTIVE COMPLETE 3-VIEW WITHOUT WRINKLE OR WRINKLE, THE ROBIN. SEE CURTISS REFERENCES AND CREDITS, FOR SOURCES.

THANK YOU
DESIGNER

REFERENCES AND CREDITS

AMERICAN AIRMAN	VOLUME 17	NUMBER 7	JULY 1934
AMERICAN AIRMAN	VOLUME 12	NUMBER 1	JULY-SEPT. 1929
MODEL AIRPLANE NEWS			FEB. 1931
CURTISS ADVERTISING BROCHURE			1929
AMERICAN AIRMAN	VOLUME 12	NUMBER 3	1929
MODERN AVIATION ENGINES	VOLUME 1	(PAGE?)	1929
ABC OF AVIATION		(PAGE?)	1934
HOW TO FLY AN AIRPLANE		(PERSONAL NOTE)	1935

MODELLER'S NOTE

BEST RESULTS ARE EXPRESSED IN THE BUILDING AND FLYING OF THIS AIRCRAFT. THE CURTISS ROBIN IS AN EXCELLENT SUBJECT FOR VARIOUS TYPES OF CONTEST FLYING, INCLUDING RC, SCALE, FREE FLIGHT SCALE AND OF COURSE OR. SCALE.

YOU WILL NOTICE THE SCALE CONSTRUCTION CAN BE DUPLICATED WITHOUT TOO MUCH DIFFICULTY. ALSO SEVERAL VIEWS OF THE INTERIOR DETAILS ARE GIVEN. THE ROBIN HAS BEEN MADE BY MANY MODELERS. GREAT RESEARCHING THIS AIRCRAFT IS AN EFFORT TO PROVIDE THE SCALE MODELLER AND CONTEST FLYING FLIPS WITH ACCURATE AND USEFUL INFORMATION FOR BUILDING AND EVALUATING THE FIDELITY TO SCALE OF A "WORKABLE QUALITY MODEL".

THANK YOU
DESIGNER

SCALE: 1/8 = 1'-0"

obin Test Flight

Kermit Weeks Curtiss Robin - Preview Video
Special Preview Video
Kermit Week's CURTISS ROBIN from Fantasy of Flight
0:04 / 0:33