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MILITARY SPECIFICATION

TRANSMITTER, SYNCHRO, ANGLE OF ATTACK OR SIDESLIP

1 SCOPE

1.1 This specification covers the requirements for angle of attack or sideslip synchro transmitters

*2 APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

SPECIFICATIONS

Federal

QQ-P-416	Plating, Cadmium (Electrodeposited)

Military

MIL-P-116	Preservation, Methods of
MIL-E-5272	Environmental Testing, Aeronautical and Associated Equipment, General Specification for
MIL-C-5541	Chemical Films and Chemical Film Materials for Aluminum and Aluminum Alloys
MIL-I-6181	Interference Control Requirements, Aircraft Equipment
MIL-S-7742	Screw Threads, Standard, Optimum Selected Series General Specification for
MIL-A-8625	Anodic Coatings, for Aluminum and Aluminum Alloys

STANDARDS

Military

MIL-STD-100	Engineering Drawing Practices
MIL-STD-129	Marking for Shipment and Storage
MIL-STD-130	Identification Marking of U. S Military Property
MIL-STD-143	Specifications and Standards, Order of Precedence for the Selection of
MIL-STD-454	Standard General Requirements for Electronic Equipment
MIL-STD-704	Electric Power, Aircraft, Characteristics and Utilization of
MIL-STD-794	Parts and Equipment, Procedures for Packaging and Packing of

MIL-STD-831	Test Reports, Preparation of
MIL-STD-838	Lubrication of Military Equipment
MS24378	Transmitter, Synchro, Angle of Attack or Sideslip
MS33586	Metals, Definition of Dissimilar

(Copies of documents required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

3 REQUIREMENTS

*3.1 Qualification The transmitters furnished under this specification shall be products which are qualified for listing on the applicable Qualified Products List at the time set for opening of bids (see 4.4 and 6.3)

3.2 Selection of specifications and standards Specifications and standards for necessary commodities and services not specified herein shall be selected according to MIL-STD-143

3.3 Materials

3.3.1 Fungus-proof materials Materials that are nutrients for fungi shall not be used where it is practical to avoid them Where used and not hermetically sealed, they shall be treated with a fungicidal or fungistatic agent acceptable to the procuring activity However if they will be used in a hermetically sealed inclosure, fungicidal treatment will not be necessary.

3.3.2 Metals Metals shall be of the corrosion-resistant type or suitably treated to resist corrosion due to fuels, salt spray, or atmospheric conditions likely to be met in storage or normal service

3.3.2.1 Dissimilar metals. Unless suitably protected against electrolytic corrosion, dissimilar metals shall not be used in intimate contact with each other Dissimilar metals are defined in MS33586

3.3.3 Nonmagnetic materials Nonmagnetic materials shall be used for all parts of the transmitter except where magnetic materials are essential.

3.3.4 Corrosive fumes The materials as installed in the transmitter and under the service conditions specified herein shall not liberate deleterious fumes

3.3.5 Protective treatment When materials are used in the construction of the transmitter that are subject to deterioration when exposed to climatic and environmental conditions likely to occur during service usage, they shall be protected against such deterioration in a manner that will in no way prevent compliance with the performance requirements of this specification. The use of any protective coating that will crack, chip, or scale with age or extremes of climatic and environmental conditions shall be avoided.

*3.4 Design and construction The transmitter shall conform to MS24378-2 and shall be designed to measure the angles of airflow with respect to an arbitrary reference line. The range of measurement shall be from -30° ±0 25° to +30° ±0.25°.

3 4 1 The transmitter shall be so designed and constructed that no parts will work loose in service. It shall be built to withstand the strains, jars, vibrations, and other conditions incident to shipment, storage, installation, and service.

*3.5 Performance. The transmitter shall be capable of meeting the requirements specified herein under the following conditions:

a Temperatures – operating temperatures ranging from -54° to -93°C and storage temperatures ranging from -64° to +71°C

b Humidity – relative humidity up to 100 percent including conditions wherein condensation takes place in the form of both water and frost

c. Salt spray – exposure to salt sea atmosphere for a period of 50 hours

d Vibration – vibration incident to service use

e Rain – rainfall as encountered in any locale

f Sand and dust – sand and dust particles as encountered in desert areas

g Fungus – fungus growth as encountered in tropical climates

h Acceleration – acceleration forces up to 10gs

i Misalignment – operation without misalignment between the sensing element and the rotor of the synchros

j Power characteristics – operation with aircraft power having characteristics in accordance with MIL-STD-704

k Aerodynamic alignment – aerodynamic alignment when displaced from 0.3° to 30° at 110 ±5 knots

l Heating element endurance – operation for 40 cycles consisting of 10 hours with power on and 2 hours with power off

m Endurance – satisfactory operation over the entire range for 30,000 cycles. A cycle is travel of the sensing element from one position limit to the opposite position limit and return to the starting position limit

3.5.1 Operational characteristics The transmitter shall respond to change of 0.2° of angular deviation of the airstream into which it is inserted throughout a speed range of 90 to 125 knots with an accuracy of 0.25°. The transmitter shall respond to a change of 0.1° of angular deviation of the airstream throughout the speed range of 125 knots to mach 3.0 with an accuracy of 0.2°.

*3.5.2 Radio noise suppression. Radio noise suppression shall be in accordance with MIL-I-6181

3.5.3 Damping and time constant. With the transmitter mounted in an airflow of 110 ±5 knots and the sensing element displaced 3° in both directions, the sensing element shall return to 0° within 0.5° maximum overshoot

3.6 Part numbering of interchangeable parts All parts having the same manufacturer's part number shall be functionally and dimensionally interchangeable The item identification and part number requirements of MIL-STD-100 shall govern the manufacturer's part numbers and changes thereto.

3.7 Output synchro transmitter There shall be two independent signal outputs as specified in 3.7.1 A 50° angular change of the sensing probe shall correspond to a 135° rotation of both synchros

3.7.1 The synchro transmitters shall be Clifton Precision Products CGC-10-AS-7, or an electrical equivalent

3.8 Electrical connector. The pins of the electrical connector shall be connected to the synchros as follows

Pins A and F (negative leads)	Single-phase winding C
Pins B and G (positive leads)	Single-phase winding H
Pins C and H	Three-phase winding X
Pins D and I	Three-phase winding Z
Pins E and J	Three-phase winding Y

*3.9 Heating element An electrical heating element shall be provided within the sensing element which shall have a rating in accordance with MS24378-2 A sufficient area of the heater shall be so concentrated near the base of the sensing element that the junction of the sensing element and the fuselage will be kept free of ice. The heater shall be automatically regulated in such a manner that the power dissipated through the heater will be an inverse function of the heater element temperature In still-air ambient temperatures of 20° to 30°C, the heater element shall not dissipate more than 135w

*3.10 Probe alignment Electrical zero shall correspond to a sensing element set at midpoint on the range of the sensing element movement This shall correspond to 0 ±0.1 synchro degree with respect to a reference line through the sensing element axis and perpendicular to the centerline joining the dowel pins shown on MS24378-2

3.11 Synchro transmitter electrical zero The procedure for determining the electrical zero shall be as specified in 4.3.6

3.12 Weight. The weight of the transmitter and connector shall not exceed 1.8 pounds.

3.13 Soldering Soldering shall be accomplished in accordance with MIL-S-6872.

*3 14 Screw threads. Unless otherwise specified, the threads of all machine screws shall conform to MIL-S-7742.

*3 15 Lubrication Materials for the lubrication of the transmitter shall be selected and applied in accordance with MIL-STD-838.

3 16 Finishes and protective coatings

3 16 1 Aluminum alloy parts Aluminum alloy parts shall be covered with an anodic film conforming to MIL-A-8625, except as follows

3.16.1 1 Small holes and case inserts need not be anodized.

3.16.1.2 Aluminum alloys that do not anodize satisfactorily shall be coated with a chemical film in accordance with MIL-C-5541

3.16 1 3 Where the primary purpose of the treatment is to afford a suitable paint base, chemical treatments in accordance with MIL-C-5541 in lieu of anodizing shall be used.

3.16 1 4 Castings containing nonaluminum alloy integral inserts may be treated with a chemical film in accordance with MIL-C-5541 in lieu of anodizing.

3 16 1 5 When abrasion resistance is a factor, chemical films in accordance with MIL-C-5541 shall not be used in lieu of anodizing.

3.16.2 Cadmium plating Cadmium plating shall be in accordance with QQ-P-416, type II or III, as applicable, and of a class that is adequate to achieve the degree of protection required.

3 17 Indexing dowel pins When pushed through the mounting flange, the two indexing dowel pins provided for aligning the unit shall not impose any adverse effects on performance of the unit as required by this specification

3.18 Identification of product Equipment, assemblies, and parts shall be marked for identification in accordance with MIL-STD-130

3 19 Workmanship. The transmitter shall be constructed and finished in a thoroughly workmanlike manner Particular attention shall be given to neatness and thoroughness of soldering, wiring, marking of parts and assemblies, plating, painting, riveting, machine screw assemblies, welding, brazing, and freedom of parts from burrs and sharp edges

3.19.1 Dimensions. Dimensions and tolerances not specified shall be as close as is consistent with the best shop practices. Where dimensions and tolerances affect the interchangeability, operation, or performance of the transmitter, they shall be held or limited accordingly.

3 19.2 Riveting. Riveting operations shall be carefully performed to insure that the rivets are tight and satisfactorily headed.

3.19 3 Cleaning The transmitter shall be thoroughly cleaned of loose, spattered, or excess solder, metal chips or other foreign material after assembly. Burrs and sharp edges as well as resin flash which might crumble shall be removed

3 19 4 Screw assemblies Assembly screws and bolts shall be tight. The word tight means that the screw or bolt cannot be appreciably tightened further without damage or injury to the screw, bolt, or threads.

3 19 5 Gears Gear assemblies shall be properly aligned and meshed and shall be operable without interference, tight spots, loose spots, or other irregularities. Where required for accurate adjustments, gear assemblies shall be free from backlash.

4 QUALITY ASSURANCE PROVISIONS

*4.1 Responsibility for inspection Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements

4 2 Classification of tests. The inspection and testing of the transmitter shall be classified as follows

a Qualification tests

b Acceptance tests

4 3 Test conditions

4 3.1 Standard atmospheric conditions Whenever the pressure and temperature existing at the time of the test are not specified definitely, it is understood that the test is to be made at atmospheric pressure (approximately 29.92 inches Hg) and at room temperature (approximately 25°C) When tests are made with atmospheric pressure or room temperature differing materially from the above values, proper allowances shall be made for the difference from the specified condition.

4 3.2 Tapping Unless otherwise specified, the transmitter shall be tapped or vibrated before a test reading is taken.

4.3.3 Test positions. Unless otherwise specified, the transmitter shall be tested with the sensing element and the electrical connector in a horizontal or vertical plane.

4.3 4 Connection. Unless otherwise specified, the transmitter shall be suitably connected to a standard test indicator and a power supply.

4.3 5 Standard test indicator Facilities for determining the rotor position of the followup synchro to within ±0.1° shall be provided. The servo system shall not introduce more than 0 1° error in the indication The single-phase winding of the transmitter synchro shall be excited with 26V 400 cps and the error signal for the amplifier shall be obtained from the single-phase winding of the followup synchro. The indicator shall be set to indicate 0° when connected to the transmitter at electrical zero For tests where a transient condition is to be recorded, an oscillograph may be substituted for the indicator When approved by the procuring activity, other methods to determine electrical zero, rotation, and scale error may be used

4.3.6 Determination of electrical zero

4 3.6.1 Synchro transmitter electrical zero. The following procedure shall be used to determine electrical zero for the synchro transmitter

a Label the rotor leads H and C as specified in 3.8.

b Select the Z stator lead (pin D) and connect it to the rotor lead

c Apply 26V 400-cps power to rotor leads H and C as specified in 3.8. Connect a VTVM between the remaining stator leads and rotate the rotor or stator until a NULL or minimum voltage is obtained.

d Measure the voltage between the H lead and the remaining stator leads If this voltage is less than the excitation voltage of the rotor, the synchro is at LOW NULL. If the voltage is greater than the rotor excitation voltage, the synchro is at HIGH NULL

e. Turn the synchro to a low null position Connect a VTVM across one of the remaining stator leads and pin A (ground) with the second lead open When the vane is turned clockwise. the voltage will increase before decreasing if the X stator lead is connected The voltage will decrease before increasing if the Y stator lead is connected All the leads of the synchro shall be labeled in accordance with the results of the above tests

f. The pin connections specified in 3.8 and direction of increasing function (counterclockwise) applies to a left-hand installation only

4 4 Qualification testing

4.4 1 Test samples The test samples shall consist of three transmitters representative of the production equipment. The samples shall be identified with the manufacturer's part number and such other information as required by the procuring activity.

*4.4.2 Test report. When the tests are conducted at a location other than the laboratory of the procuring activity, the following shall be furnished to that activity:

a Test report – Three copies of a test report in accordance with MIL-STD-810

b Test sample – The samples that were tested (in the "as is" condition).

4 4 3 Qualification tests The qualification tests shall consist of all the tests described under 4.6.

4.5 Acceptance tests. Acceptance tests shall consist of

a. Individual tests

b Sampling tests.

4.5.1 Individual tests. Each transmitter shall be subjected to the following tests as described under 4.6

a. Examination of product

b Electrical zero and rotation

c Aerodynamic alignment

d Scale error at room temperature

4 5.2 Sampling plans and tests

4.5.2.1 Sampling plan A One transmitter shall be selected at random from each 100 or less produced on the contract or order and subjected to the following tests as described under 4.6

a. Individual tests

b Low temperature operation

c. High temperature operation

d Vibration

e Heating element endurance

*4 5.2.2 Sampling plan B Unless otherwise specified, 3 transmitters shall be selected at random from the first 15 items of the contract or order and subjected to the following tests as described under 4.6·

a. Sampling plan A tests

b. Heating element operation

c. Damping and time constant

d. Low temperature exposure

e High temperature exposure

f. Rain

g Humidity

h Sand and dust

i Fungus

j Salt spray

k Endurance

l Radio noise suppression

m Acceleration

n Oscillatory acceleration.

4 5 2 3 Rejection and retest When one item selected from a production run fails to meet the specification, no items still on hand or later produced shall be accepted until the extent and cause of failure are determined. After corrections have been made, all necessary tests shall be repeated.

4 5.2 3.1 Individual tests may continue For operational reasons, individual tests may be continued pending the investigat' n of a sampling test failure But final acceptance of items on hand or later produced shall not be made until it is determined that items meet all the requirements of the specification.

4.5.2 4 Defects in items already accepted The investigation of a test failure could indicate that defects may exist in items already accepted If so, the contractor shall fully advise the procuring activity of all defects likely to be found and methods of correcting them.

4.6 Test methods

4 6.1 Examination of product The transmitter shall be inspected to determine compliance with the requirements specified herein with respect to dimensions, materials, workmanship, and marking.

4.6.2 Electrical zero and rotation The transmitter shall be connected as specified in 4.3 4 and 4.3 5 When the sensing element is set to the center position (zero degree with respect to a perpendicular to the centerline through two dowel pins), the pointer on the test indicator shall indicate 0° ±0.2° as read on the test indicator When the sensing element is rotated in the direction of increasing positive function, the pointer of the test indicator shall rotate clockwise. When the sensing element is rotated in the direction of decreasing positive function, the pointer of the test indicator shall rotate counterclockwise.

*4.6.3 Aerodynamic alignment. The transmitter shall be mounted on alignment pins in a suitable wind tunnel and connected as specified in 4.6.2. The airspeed in the working section of the wind tunnel shall be adjusted to 110 ±5 knots. The test indicator shall indicate zero within the tolerances specified in table I. The sensing element shall then be displaced various amounts from 0.3° to 30°, inclusive, in both directions. After being released, without impulse, the sensing element shall return to zero within the same specified tolerances With prior approval by the contracting officer, this test may be simulated by the use of a suitable jig and springs to simulate the aerodynamic forces of the wind tunnel As an alternate method, the following test procedure may be used Install the unit in the test fixture in such a manner as to locate the alignment pins at 90° to the bisector of the vane wedge When the unit is so positioned, the synchros shall be at electrical zero ±0.08° The transmitter shall then be rotated throughout its 60° angular travel at a constant speed of 1/32 rpm The force required to keep the vane arm from rotating shall be measured and shall not exceed 12 grams This test may be conducted in conjunction with the scale error test

*TABLE I

Aerodynamic Alignment

Column 1	Column 2	Column 3
Sensing Element Angle (Degree)	Test Indicator (Degree)	Test Indicator Tolerance (Degree)
-30.0	+279.00	±0.2
-25.0	+292.50	±0.2
-24.9	+292.77	±0.2
-20.0	+306.00	±0.2
-19.9	+306.27	±0.2
-15.0	+319.50	±0.2
-10.0	+333.00	±0.2
- 9 9	+333.27	±0.2
- 1.0	+357.30	±0.2
- 0.9	+357.57	±0.2
0	0	±0.2
+ 0.9	+ 2.43	±0.2
+ 1.0	+ 2.70	±0.2
+ 9.9	+ 26.73	±0.2
+10.0	+ 27.00	±0.2
+15.0	+ 40.50	±0.2
+19.9	+ 53.73	±0.2
+20.9	+ 54.00	±0.2
+24.9	+ 67.23	±0.2
+25.0	+ 67.50	±0.2
+30.0	+ 81.00	±0.2

4.6.4 Scale error at room temperature. The transmitter shall be connected as specified in 4.3.4 and 4.3.5. The sensing element shall then be rotated to each of the positions specified in table I, column 1. The test indicator shall indicate as specified in table I, column 2, within the tolerances of column 3. Both synchros shall be tested in this manner

4.6.5 Low temperature operation. The transmitter shall be connected as specified in 4.3.4 and 4.3.5 and placed in a chamber in which the ambient air temperature is -54° ±2°C for a period of 4 hours. At the end of this period and while at the specified temperature, power shall be applied. The transmitter shall then be subjected to and shall meet the individual tests.

4.6.6 High temperature operation The transmitter shall be connected as specified in 4.3.4 and 4.3.5 and placed in a chamber in which the ambient air temperature is 71° ±2°C for a period of 4 hours. At the end of this period, the temperature shall be increased to 93° ±2°C The deicing heater shall then be energized for a period of 5 minutes during which the equipment shall be operating, and the sensing element shall be moved slowly from one extreme of travel to the other. At the end of this period, the ambient air temperature shall be allowed to return to 71° ±2°C and the transmitter shall be subjected to and shall meet the individual tests.

*4.6.7 Vibration. The transmitter shall be connected as specified in 4.3.4 and 4.3.5 and mounted on a suitable vibration stand with the sensing element in a horizontal position A steady stream of air at approximately 110 ±5 knots velocity shall be directed at the sensing element along a line perpendicular to a line connecting the dowel pins and horizontal with the sensing element. With the system operating, the transmitter shall then be subjected to a vibration test in accordance with procedure XII of MIL-E-5272. The indicator reading shall not vary from that noted prior to vibration when corrected for false errors due to the movement across the airstream This test may be simulated by use of a suitable jig and springs that simulate the aerodynamic forces of the wind tunnel.

*4.6.8 Heating element

4.6.8.1 Endurance The heater power consumption (steady-state maximum value of 135w) shall not change more than 10 percent after the heating element has been subjected to a 40-cycle endurance test. Each cycle shall consist of 10 hours with power on and 2 hours with power off. One hundred of the four-hundred hours of operation shall be run in still air at room temperature, and the other three hundred hours of operation shall be run with the probe in an airflow at room temperature with the velocity no greater than 50 knots Any damage resulting from this test that would affect proper operation of the probe shall be cause for rejection.

4.6.8.2 Operation The transmitter shall be mounted in an icing wind tunnel and tested at indicated airspeeds of 100 and 350 ±5 knots at a temperature of -30° ±5°C. The liquid water content of the air flowing over the sensing element shall be 1.00 ±0.25 grams per cubic meter of air. Rated voltage applied to the heater elements of the transmitter shall prevent formation of ice on the sensing element for a period of not less than 15 minutes while the conditions specified herein are maintained.

4 6 9 Damping and time constant. With the transmitter mounted in a wind tunnel as in the aerodynamic alignment test and with the airspeed adjusted to 110 ±5 knots, the sensing element shall be displaced 3° in both directions. Upon release, the sensing element shall return to 0° with an overshoot no greater than 0.5°. Maximum flutter about this position, discounting airstream turbulence, shall not exceed ±0.15°. This procedure shall be repeated and the time required for the sensing element displacement to be reduced to 36.7 percent of its maximum value shall not exceed 0.075 second This test may be simulated by use of suitable jig and springs to simulate the aerodynamic forces of the wind tunnel

4 6.10 Low temperature exposure The transmitter shall be subjected to a temperature of -64° ±2°C for a period of 48 hours The transmitter shall then be allowed to return to room temperature after which it shall be subjected to and shall meet the individual tests No damage or deterioration shall have occurred that would affect subsequent operation

4.6.11 High temperature exposure The transmitter shall be subjected to a temperature of 71° ±2°C for a period of 24 hours The transmitter shall then be allowed to return to room temperature. No damage shall have occurred to any part of the transmitter that would affect subsequent operation The transmitter shall then be subjected to and shall meet the individual tests.

4 6 12 Rain The transmitter shall be tested in a water-spray wind tunnel at an indicated airspeed of approximately 20 knots at room temperature for a period of 2 hours. Water spray equivalent to a heavy rain (0 80 inch per hour) shall be introduced into the wind stream Only the sensing element shall be exposed to the wind stream, the remainder of the transmitter shall be inclosed to simulate installed conditions The sensing element shall be horizontal and facing upstream. After the 2-hour exposure to the wind stream containing the water spray, the inside of the transmitter shall be examined and no moisture shall be present.

4.6.13 Environmental tests The following tests shall be conducted in accordance with the applicable procedures of MIL-E-5272 and as specified herein

4 6 13.1 Humidity The humidity test shall be conducted in accordance with procedure I except the test period shall be for a period of 15 cycles. During the test period, the transmitter connector contacts shall be protected At the conclusion of the test, the inside of the transmitter shall be examined and no moisture shall be present.

4 6.13.2 Sand and dust The sand and dust test shall be conducted in accordance with procedure I except the test period shall be 12 hours, and a stream of sand which would pass through a 150-mesh screen, having a velocity of approximately 20 knots, shall be directed at the front of the sensing element. The body of the transmitter shall be protected from the airstream. At the end of the 12-hour test period, the transmitter shall meet all the individual tests.

4.6.13.3 Fungus. The fungus test shall be conducted in accordance with procedure I. At the conclusion of the test, the transmitter shall meet and pass the individual tests. There shall be no deterioration which would adversely affect subsequent operation nor shall any part of the transmitter support fungus growth

4 6.13.4 Salt spray The salt spray test shall be conducted in accordance with procedure I as specified for a period of 50 hours No damage shall result from this test which would affect subsequent operation Following this test, the transmitter shall be subjected to and shall meet the individual tests.

4 6.14 Endurance The sensing element of the transmitter shall be oscillated throughout the range of travel for 30,000 cycles. At the conclusion of this test, the transmitter shall be subjected to and shall meet the individual tests

*4.6.15 Radio noise The transmitter shall meet the radio noise suppression tests specified in MIL-I-6181 within the frequency range of 150 kc to 150 mc

4 6.16 Acceleration The transmitter shall be subjected to an acceleration of 10g in the vertical and transverse directions without failure The transmitter shall be capable of operating when subjected to an acceleration of 5g in the vertical and transverse directions with a maximum degradation in dynamic accuracy of ±0.1° The scale error shall be determined at a simulated airspeed of 300 ±10 knots

*4.6.17 Oscillatory acceleration. The mounting and air velocity for this test shall be as specified in 4 6 7. The transmitter shall be oscillated at a frequency of 2 cps and accelerated at a rate of 0.5g for a minimum period of 10 minutes. During this test, the vane shall remain aligned with the airstream. Degradation in dynamic accuracy shall not exceed ±0.2°.

*5 PREPARATION FOR DELIVERY

5.1 Preservation and packaging

5.1.1 Level A. Transmitters shall be preserved in accordance with MIL-P-116, method II, and packaged in accordance with MIL-STD-794

5 1.2 Level C Transmitters shall be packaged in accordance with MIL-STD-794.

5.2 Packing

5.2.1 Levels A and C Transmitters shall be packed in accordance with MIL-STD-794.

5 3 Marking of shipments Interior packages and exterior shipping containers shall be marked for shipment in accordance with MIL-STD-129 The shipment marking nomenclature shall be as follows

TRANSMITTER, SYNCHRO, ANGLE OF ATTACK OR SIDESLIP.

5.3.1 Reinspection date marking. Reinspection date markings shall be in accordance with the instructions of the procuring activity.

6. NOTES

6.1 Intended use The transmitter covered by this specification is intended for use in aircraft as a means of determining the angle of airflow at the point of installation of the transmitter (local angle of attack or sideslip) and to transmit electrical signals to indicators or other equipment

*6.2 Ordering data Procurement documents should specify the following

a. Title, number and date of this specification

b. When sampling plan B tests will not be conducted

c. Levels of packaging and packing required and reinspection date markings.

*6.3 Qualification With respect to products requiring qualification, awards will be made only for such products which are, at the time set for opening of bids, qualified for inclusion in the applicable Qualified Products List whether or not such products have actually been so listed by that date The attention of the suppliers is called to this requirement, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or orders for the products covered by this specification The activity responsible for the Qualified Products List is the Systems Engineering Group, Attn SEFIF, Wright-Patterson Air Force Base, Ohio, and information pertaining to qualification of products may be obtained from that activity.

6.4 Marginal indicia The outside margins of this specification are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in those notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last issue

Custodian
Air Force - 11

Preparing activity
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Review activities
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