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PRODUCT CATALOG
2026

MINI6
MULTIFUNCTIONAL INDICATOR

SIMPLE
SAFE
CERTIFIED

RCA2610-3P

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KMC
KELLY MANUFACTURING COMPANY
Wichita, Kansas, U.S.A.

LEADERS IN AVIATION INSTRUMENTATION

January 2026

TABLE OF CONTENTS

Contact Us....page 2
About Our Company....page 3
Digital Instruments
RCA2610-3P Mini6 Electric Digital Multifunction Indicator....page 4
RCA2610 Electric Digital Attitude Indicator....page 5
RCA2610 Pitot-Static Electric Digital Attitude Indicator....page 9
RCA1510 Electric Digital Heading Indicator....page 12
RCA8310 Electric Digital Turn Coordinator....page 14
Ordering Your Attitude Indicator....page 16
Slip Indicator....page 16
Fixed and Movable Pointers Diagram....page 17
Electric Attitude Indicators
RCA26EK Series....page 18
RCA26AK & BK Series....page 20
Vacuum Horizon Indicators
RCA22 Series....page 23
Directional Gyro, Vacuum
RCA11A Series....page 25
Autopilot Vacuum Directional Gyro
RCA11D Series....page 28
Electric Turn and Bank Indicators (3 inch)....page 29
Tachometers (2 inch)....page 31
Tachometers (3 inch)....page 33
Torque Indicator....page 34
Oil Temp Indicators....page 35
Emergency Products
Low Voltage Warning System....page 36
Frequently asked questions....page 37
Panel Cutout Patterns for 3-inch Instruments....page 38

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KMC
KELLY MANUFACTURING COMPANY

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We Service all RC Allen Instruments, call for more information.

ABOUT OUR COMPANY

Kelly Manufacturing Company is the manufacturer of the **R.C. Allen** line of instruments. KMC is the largest manufacturer of general aviation aircraft instruments in the world and is situated in the downtown area of Wichita, Kansas. KMC also is an FAA licensed repair station for warranty repairs and service repairs for all R.C. Allen instruments.

R.C. Allen Inc. was founded by Ralph C. Allen (1884-1967) in 1932, in Grand Rapids, Michigan. Later, it became known as R.C. Allen Business Machines Inc. and was one of the leading manufacturers of business machines. Thousands of old R.C. Allen cash registers, adding machines, and typewriters can still be found across the country today.

At the onset of World War II, the need for a large quantity of aircraft propelled R.C. Allen Business Machines into the aviation world. R.C. Allen had the facilities to manufacture the delicate instruments needed for the war effort. Thousands of R.C. Allen Turn and Bank instruments were installed on war-bound aircraft to help win the war for the Allied Forces. After the war, R.C. Allen continued as a major government contractor, and manufactured instruments for the Korean War. Thousands of Rate Gyro Transmitters were made for military jets during this period. During peacetime, the company developed sub-miniature gyros for Saturn rockets, and at one time, twenty of the special gyros were in orbit at the same time.

By 1972, R.C. Allen was the largest manufacturer of aircraft instruments for general aviation in the world. In 1977, R.C. Allen Business Machines Inc. was sold off and the instrument division was moved to the AIR CAPITAL OF THE WORLD, Wichita, Kansas. Under new ownership, it became the R.C. Allen Division of Aircraft Instrument and Development (A.I.D.).

In 1996, Kelly Manufacturing Company (KMC) purchased A.I.D. becoming the new manufacturer of the R.C. Allen line. Today, R.C. Allen still retains its position as aviation's most trusted line of aircraft instruments worldwide.

KMC manufactures a wide range of quality FAA TSO Certified instruments for a variety of military and general aviation aircraft. With the introduction of the **Mini6** All-in-One Indicator and the **RCA1510** Directional Indicator, KMC stays on the cutting edge of aviation technology and safety.

Mini6

ELECTRIC DIGITAL MULTIFUNCTION INDICATOR

The **Mini6** indicator is the newest addition to RC Allen's groundbreaking line of digital instruments. It offers all the instrumentation of a traditional Six Pack in one clean, customizable and easy to read presentation. The fully certified, easy to install indicator comes equipped with an internal battery backup providing an exceptional level of redundancy to any application.

ELECTRICAL REQUIREMENTS

Operating voltage: 9 to 32 VDC
Circuit breaker 1 Amp
Current draw:
0.35 Amp max (14VDC), 0.20 Amp max (28VDC)
Battery: Rechargeable LiPo 500 mAh (1.85 Wh)
Vertical speed range: ± 9,000 feet/minute

DIMENSIONS

Length: 2.3 in. max
Width: 3.37 in. max
Height: 3.37 in. max
Weight: 8.3 oz. max
Max Indicated Airspeed: 300kts
Altitude range: -5,000 - +33,000 feet

TSO'S AND CERTIFICATIONS

TSO-C4C Bank and Pitch Instruments
TSO-C113a Airborne Multipurpose Electronic Displays
TSO-C3e Turn and Slip Instrument
TSO-C6e Direction Instrument, Magnetic (Gyroscopically Stabilized)
TSO-C2d Airspeed Instruments
TSO-C10c Pressure Altimeter System
TSO-C8e Vertical Velocity Instruments (Rate-of-Climb)
Environmental Certification: (DO-160G)
Software Certification: (DO-178B)

MINI6
MULTIFUNCTIONAL INDICATOR

FEATURES:

- Customizable Display Features
- Selectable – Ground Track or Magnetic Heading
- Easy to Install – completely self-contained
- Fits standard Cutouts
- Internal Battery Backup – up to 3 hours
- Reliable Solid State
- Fully FAA TSO Certified
- **2 YEAR LIMITED WARRANTY**

RCA2610-3P-Mini6
P/N102-0403-15-17

Connector pin-out:
A: GROUND B: +POWER IN
C: COMM-TX D: COMM-RX

MATING CONNECTOR
(MS3116E8-4S). Panel screws included.

Pitot-Static port: 1/8 NPT fitting

RCA2610 SERIES
ELECTRIC DIGITAL ATTITUDE INDICATOR

The **RCA2610 Series** Digital Horizon is the culmination of 10 years of innovation from ***RC Allen***. The **RCA2610** now has a standard display that includes a *Digital Slip Indicator* and *Rate of Turn Indicator*. The three-inch **RCA2610-3** and two-inch **RCA2610-2** both come with an optional *Internal Battery Backup*. All models are available with an **NVIS** Night Vision filter option.

The standard ***Pitch Sync*** feature allows pilots to instantly synchronize the airplane symbol to the horizon line when flying in a pitch up or pitch down attitude.

We also offer the **RCA2610-G** which comes without the ***Pitch-Sync*** feature. The symbolic airplane is not adjustable. Both versions are available in 3-inch and 2-inch sizes and are designed as a direct replacement for your Electric Attitude Gyro.

The **RCA2610** is totally self-contained and has no mechanical gyro or special external connections. The screens are highly visible and have adjustable brightness controls. Performance characteristics include full 360 degrees of roll and pitch with a settling error of 1 degree maximum. With no moving parts, the **RCA2610** will have a longer lifespan than traditional gyroscopic instruments.

The Digital Slip Indicator or the optional Mechanical Slip Indicator (P/N 444-0010-01) can be ordered to satisfy FAA AC91-75.

Features:

- **Digital Slip Indicator**
- **Digital Rate of Turn Indicator**
- **Internal Battery Backup**
- Pitch Sync feature
- 360 degrees of pitch and roll.
- Multi-volt operation (9 to 32 VDC).
- Bright, adjustable LCD Display
- NVIS Night Vision Option
- Fits standard 2” or 3” panel cutout.
- Totally digital operation (no moving parts).
- Black anodized bezel.
- Fully FAA TSO Certified.
- **TWO-YEAR WARRANTY**

TWO-YEAR LIMITED WARRANTY!

RCA2610-3

RCA2610-2

STANDARD CONFIGURATIONS:

- Attitude Indicator with **Digital Slip Indicator** and **Digital Rate of Turn Indicator**.
- Attitude Indicator with **Digital Slip Indicator** only.
- Attitude Indicator only with optional **Mechanical Slip Indicator** (P/N 444-0010-01).

New **Internal Battery Backup** option for All configurations!

RCA2610 SERIES
ELECTRIC DIGITAL ATTITUDE INDICATOR

ELECTRICAL REQUIREMENTS
Operating voltage: 9 to 32 VDC
Current draw: 0.20 A max
Circuit Breaker 1 A

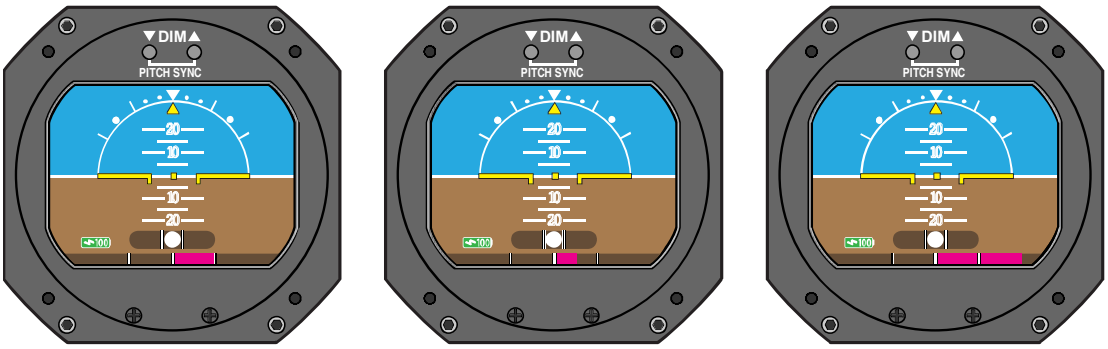
DIMENSIONS RCA2610-3
Length: 1.22 in. max.
Width: 3.37 in. max
Height: 3.37 in. max
Weight: 6.75 oz.

DIMENSIONS RCA2610-2
Length: 1.22 in. max.
Width: 2.75 in. max
Height: 2.4 in. max
Weight: 4.75 oz.

CONNECTOR PIN-OUT:
A: GROUND **B**: + POWER IN
C: SPARE **D**: SPARE

MATING CONNECTOR
Mating connector (MS3116E8-4S). Panel screws included.

CERTIFICATIONS
TSO-C4c, TSO-C113a, DO-160G, and DO178B Level C
TSO-C3e



2 MINUTE TURN **4 MINUTE TURN** **1 MINUTE TURN**

RATE-OF-TURN INDICATOR

The **Panel Tilt Angle** for the **RCA2610** can be set from 0 to 90 degrees in one-degree increments.
The Panel Tilt Angle is pre-set and must be specified at time of order.
Non-standard angles may require special orders through your supplier

The standard ***Pitch Sync*** feature allows pilots to instantly synchronize the airplane symbol to the horizon line when flying in a pitch up or pitch down attitude.

RCA2610-3 (3-INCH) With Pitch Sync

All features shown.

MODEL RCA2610-3 (3-INCH) WITH PITCH SYNC				
PART NUMBER	OPTIONAL FEATURES			
	SLIP INDICATOR	TURN RATE INDICATOR	BATTERY BACKUP	NVIS
102-0403-11-09	X	X	X	
102-0403-11-01	X	X		
102-0403-07-09	X		X	
102-0403-07-01	X			
102-0403-03-09			X	
102-0403-03-01				
102-0403-13-10	X	X	X	X
102-0403-13-02	X	X		X
102-0403-09-10	X		X	X
102-0403-09-02	X			X
102-0403-05-10			X	X
102-0403-05-02				X

RCA2610-2 (2-INCH) With Pitch Sync

All features shown.

MODEL RCA2610-2 (2-INCH) WITH PITCH SYNC				
PART NUMBER	OPTIONAL FEATURES			
	SLIP INDICATOR	TURN RATE INDICATOR	BATTERY BACKUP	NVIS
102-0402-11-09	X	X	X	
102-0402-11-01	X	X		
102-0402-07-09	X		X	
102-0402-07-01	X			
102-0402-03-09			X	
102-0402-03-01				
102-0402-13-10	X	X	X	X
102-0402-13-02	X	X		X
102-0402-09-10	X		X	X
102-0402-09-02	X			X
102-0402-05-10			X	X
102-0402-05-02				X

** Represents Manufacturer's Choice: Best value and lead times.*

Mating connector (MS3116E8-4S) & panel screws included.
The Panel Tilt Angle is pre-set and must be specified at time of order.

RCA2610-3-G (3-INCH) No Pitch Sync

All features shown.

MODEL RCA2610-3-G (3-INCH) NO PITCH SYNC				
PART NUMBER	OPTIONAL FEATURES			
	SLIP INDICATOR	TURN RATE INDICATOR	BATTERY BACKUP	NVIS
102-0403-11-11	X	X	X	
102-0403-11-03	X	X		
102-0403-07-11	X		X	
102-0403-07-03	X			
102-0403-03-11			X	
102-0403-03-03				
102-0403-13-12	X	X	X	X
102-0403-13-04	X	X		X
102-0403-09-12	X		X	X
102-0403-09-04	X			X
102-0403-05-12			X	X
102-0403-05-04				X

RCA2610-2-G (2-INCH) No Pitch Sync

All features shown.

MODEL RCA2610-2-G (2-INCH) NO PITCH SYNC				
PART NUMBER	OPTIONAL FEATURES			
	SLIP INDICATOR	TURN RATE INDICATOR	BATTERY BACKUP	NVIS
102-0402-11-11	X	X	X	
102-0402-11-03	X	X		
102-0402-07-11	X		X	
102-0402-07-03	X			
102-0402-03-11			X	
102-0402-03-03				
102-0402-13-12	X	X	X	X
102-0402-13-04	X	X		X
102-0402-09-12	X		X	X
102-0402-09-04	X			X
102-0402-05-12			X	X
102-0402-05-04				X

** Represents Manufacturer's Choice: Best value and lead times.*

Mating connector (MS3116E8-4S) & panel screws included.
The Panel Tilt Angle is pre-set and must be specified at time of order.

RCA2610-P SERIES
ELECTRIC DIGITAL ATTITUDE INDICATOR
PITOT-STATIC INPUT

The **RCA2610-P** Pitot-Static has all of the same features that is on the standard **RCA2610** Digital Attitude Indicator but has additional Pitot-Static input. The standard **RCA2610** uses mathematical algorithms to calculate airspeed which is perfect for most small aircraft. The addition of the ***Pitot-Static*** input, gives the **RCA2610-P** more precise speed information for greater accuracy and stability in faster, high performance aircraft.

ELECTRICAL REQUIREMENTS
Operating voltage: 9 to 32 VDC
Current draw: 0.20 A max
Circuit breaker 1 A

DIMENSIONS RCA2610-3P
Length: 1.22 in. max.
Width: 3.37 in. max
Height: 3.37 in. max
Weight: 6.75 oz.

DIMENSIONS RCA2610-2P
Length: 1.22 in. max.
Width: 2.75 in. max
Height: 2.4 in. max
Weight: 4.75 oz

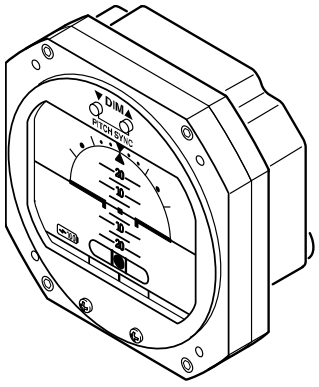
CONNECTOR PIN-OUT:
A: GROUND **B**: + POWER IN
C: SPARE **D**: SPARE

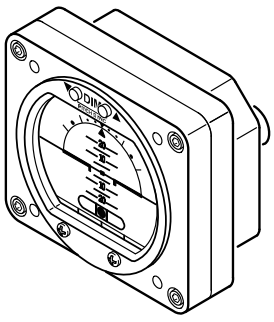
MATING CONNECTOR
Mating connector (MS3116E8-4S) & panel screws included.

Pitot-Static port: 1/8 NPT fitting

CERTIFICATIONS
TSO-C4c, TSO-C113a, DO-160G, and DO178B Level C
TSO-C3e

TWO YEAR LIMITED WARRANTY


RCA2610-3P


RCA2610-2P

The **Panel Tilt Angle** for the **RCA2610-P** can be set from 0 to 90 degrees in one-degree increments.
The Panel Tilt Angle is pre-set and must be specified at time of order.

The standard ***Pitch Sync*** feature allows pilots to instantly synchronize the airplane symbol to the horizon line when flying in a pitch up or pitch down attitude.

RCA2610-3P (3-INCH) PITOT STATIC With Pitch Sync

All features shown.

MODEL RCA2610-3P PITOT STATIC WITH PITCH SYNC				
Part Number	OPTIONAL FEATURES			
	SLIP INDICATOR	TURN RATE INDICATOR	BATTERY BACKUP	NVIS
102-0403-12-13	X	X	X	
102-0403-12-05	X	X		
102-0403-08-13	X		X	
102-0403-08-05	X			
102-0403-04-13			X	
102-0403-04-05				
102-0403-14-14	X	X	X	X
102-0403-14-06	X	X		X
102-0403-10-14	X		X	X
102-0403-10-06	X			X
102-0403-06-14			X	X
102-0403-06-06				X

RCA2610-2P (2-INCH) PITOT STATIC With Pitch Sync

All features shown.

MODEL RCA2610-2P PITOT STATIC WITH PITCH SYNC				
PART NUMBER	OPTIONAL FEATURES			
	SLIP INDICATOR	TURN RATE INDICATOR	BATTERY BACKUP	NVIS
102-0402-12-13	X	X	X	
102-0402-12-05	X	X		
102-0402-08-13	X		X	
102-0402-08-05	X			
102-0402-04-13			X	
102-0402-04-05				
102-0402-14-14	X	X	X	X
102-0402-14-06	X	X		X
102-0402-10-14	X		X	X
102-0402-10-06	X			X
102-0402-06-14			X	X
102-0402-06-06				X

** Represents Manufacturer's Choice: Best value and lead times.*

Mating connector (MS3116E8-4S) & panel screws included.
The Panel Tilt Angle is pre-set and must be specified at time of order.

RCA2610-3P-G (3-INCH) PITOT STATIC No Pitch Sync

All features shown.

MODEL RCA2610-3P-G PITOT STATIC NO PITCH SYNC				
PART NUMBER	OPTIONAL FEATURES			
	SLIP INDICATOR	TURN RATE INDICATOR	BATTERY BACKUP	NVIS
102-0403-12-15	X	X	X	
102-0403-12-07	X	X		
102-0403-08-15	X		X	
102-0403-08-07	X			
102-0403-04-15			X	
102-0403-04-07				
102-0403-14-16	X	X	X	X
102-0403-14-08	X	X		X
102-0403-10-16	X		X	X
102-0403-10-08	X			X
102-0403-06-16			X	X
102-0403-06-08				X

RCA2610-3P-G (3-INCH) PITOT STATIC No Pitch Sync

All features shown.

	MODEL RCA2610-2P-G PITOT STATIC NO PITCH SYNC			
PART NUMBER	OPTIONAL FEATURES			
	SLIP INDICATOR	TURN RATE INDICATOR	BATTERY BACKUP	NVIS
102-0402-12-15	X	X	X	
102-0402-12-07	X	X		
102-0402-08-15	X		X	
102-0402-08-07	X			
102-0402-04-15			X	
102-0402-04-07				
102-0402-14-16	X	X	X	X
102-0402-14-08	X	X		X
102-0402-10-16	X		X	X
102-0402-10-08	X			X
102-0402-06-16			X	X
102-0402-06-08				X

** Represents Manufacturer's Choice: Best value and lead times.*

Mating connector (MS3116E8-4S) & panel screws included.
The Panel Tilt Angle is pre-set and must be specified at time of order.

RCA1510 SERIES
ELECTRIC DIGITAL HEADING INDICATOR

Our **RCA1510** Series Digital Heading Indicator has been updated with new features and a new look. The new on-screen menu allows for quick heading setting and for changing heading types.

The **RCA1510** is a Digital Heading Indicator with an optional Internal Battery Backup with up to three hours of backup power. The instrument obtains GPS information through an RS232 communication signal from an existing GPS receiver on the aircraft. An optional internal GPS receiver which obtains a GPS signal from a dedicated powered antenna is also available (See Options and Configurations on page 13).

The display has multiple options which can show the Magnetic Heading (MAG HDG) or GPS Ground Track Heading (GND TRK) individually or both simultaneously. The heading can also be shown either as a numerical display or as a Heading Mark on the Heading Dial.

Because the **RCA1510** has no mechanical gyroscope, it is much more accurate than traditional heading indicators. Unlike a mechanical gyroscopic unit, the **RCA1510** is not affected by drifting or wandering. The unit is designed to default to Magnetic Heading in the event that the GPS signal is lost.

REPLACEMENT FOR RCA15 SERIES ELECTRIC DG (DISCONTINUED).

ELECTRICAL REQUIREMENTS
Operating voltage: 9 to 32 VDC
Circuit breaker 1 A
Current draw:
0.20 A max (28VDC), 0.35 A max (14VDC)
Battery: Rechargeable LiPo (1.85 Wh)

DIMENSIONS RCA1510-3
Length: 2.3 in. max
Width: 3.37 in. max
Height: 3.37 in. max
Weight: 8 oz. max

CERTIFICATIONS
TSO-C6e, TSO-C113a, DO-160G,
and DO178B Level C

Features

- Easy User Interface
- New Customization Options
- Optional Battery Backup (up to 3 hours)
- Multi-Volt Operation (9 to 32 VDC)
- Fits Standard 3-inch Panel Cutouts
- Sharp Dimmable Display
- **NVIS** Night Vision Option
- Fully FAA Certified
- **Two Year Warranty**

RCA1510-3

RCA1510-3
Features Quick-Set Bug and brightness control.

Connector pin-out:
A: GROUND B: +POWER IN
C: COMM-TX D: COMM-RX

MATING CONNECTOR
(MS3116E8-4S) & panel screws included.

Options and Configurations:

MODEL 1510-3 DIGITAL HEADING INDICATOR				
PART NUMBER	OPTIONAL FEATURES			
	INTERNAL GPS (SMA Antenna Connection)	RS232 SERIAL CONNECTION	NVIS COMPATIBLE	BATTERY BACKUP
103-0503-03-01	X			
103-0503-03-02	X		X	
103-0503-03-03	X			X
103-0503-03-04	X		X	X
103-0503-03-05		X		
103-0503-03-06		X	X	
103-0503-03-07		X		X
103-0503-03-08		X	X	X

** Represents Manufacturer's Choice: Best value and lead times.*

Mating Connector: (MS3116E8-4S) & panel screws included.
Panel tilt angle is set by user

RCA8310 SERIES
ELECTRIC DIGITAL TURN COORDINATOR/TURN & BANK

The **RCA8310-3** (3-Inch) and the **RCA8310-2** (2-Inch) Digital Turn Coordinators are the latest additions to the **RC Allen** Digital Lineup. They are ***fully FAA certified***, digital replacements for mechanical turn coordinators or mechanical turn and bank instruments. They are designed to be intuitive to use and look and react the same as a mechanical gyro instrument.

The **RCA8310** is basically two instruments in one. It can be used as either a Turn Coordinator or a Turn and Bank instrument. You can choose from a variety of customizations allowing you to select between three classic traditional looks: 1) Turn Coordinator 2) Turn and Bank (with doghouse indexes) and 3) Turn and Bank (without doghouse indexes). Each configuration displays a ball type inclinometer (slip indicator) to show slip and skid for a coordinated turn.

Because the **RCA8310** has no mechanical gyroscope, it is much more stable and reliable than mechanical gyro instruments. It can be set to output all necessary signals for legacy autopilot applications. Optional features, such as Internal Battery Back-up (recommended) and NVIS compatibility are also available. The autopilot output signals can be disabled if not required.

REPLACEMENT FOR RCA83 SERIES ELECTRIC TURN COORDINATOR (DISCONTINUED).

ELECTRICAL REQUIREMENTS
Operating voltage: 9 to 32 VDC
Circuit breaker 1 Amp
Current draw:
0.20 A max (28VDC), 0.35 A max (14VDC)
Battery: Rechargeable LiPo (1.85 Wh)

DIMENSIONS RCA8310-3
Length: 2.3 in. max
Width: 3.37 in. max
Height: 3.37 in. max
Weight: 6.7 oz. max

CERTIFICATIONS
TSO-C113b, TSO-C3e, DO-160G,
DO178B Level C, and DO347

Features

- Easy User Interface
- Customization Options
- Optional Battery Backup (up to 3 hours)
- Multi-Volt Operation (9 to 32 VDC)
- Sharp Dimmable Display
- Fits Standard 3-inch and 2-inch Panel Cutouts
- **NVIS** Night Vision Option
- Fully FAA Certified
- **Two Year Warranty**

RCA8310-3

Features selectable instrument type:
Turn Coordinator (shown) or Turn and Bank.

Connector pin-out:
See below

MATING CONNECTOR
DB-15 2146T13 or equivalent & panel screws included.

RCA8310-2

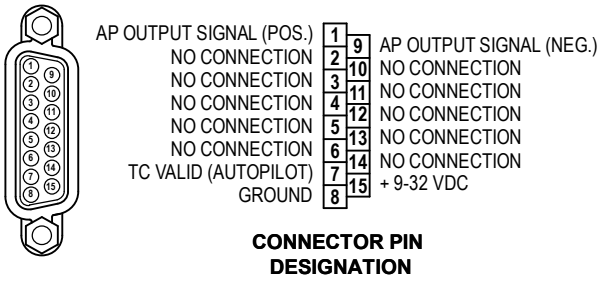
Features selectable instrument type:
Turn and Bank (shown) or Turn Coordinator.

Connector pin-out:
See below

MATING CONNECTOR
DB-15 2146T13 or equivalent & panel screws included.

Options and Configurations:

MODEL 8310-3 DIGITAL TURN COORDINATOR		
PART NUMBER	OPTIONAL FEATURES	
	NVIS COMPATIBLE	BATTERY BACKUP
100-0803-01-01		X
100-0803-01-02	X	X
100-0803-01-03		
100-0803-01-04	X	



CONNECTOR PIN DESIGNATION

MODEL 8310-2 DIGITAL TURN COORDINATOR		
PART NUMBER	OPTIONAL FEATURES	
	NVIS COMPATIBLE	BATTERY BACKUP
100-0802-01-01		X
100-0802-01-02	X	X
100-0802-01-03		
100-0802-01-04	X	

** Represents Manufacturer's Choice: Best value and lead times.*

Mating Connector: (DB15 2146T13) & panel screws included.
Panel tilt angle is set by user

Ordering Your Attitude Indicator

The following items must be answered before placing an order.

PLEASE NOTE THAT PANEL TILT ANGLE IS VERY IMPORTANT!

1. Model number
2. Fixed or Movable pointer
3. Panel Tilt Angle ***
4. Lighted or unlighted (lighting voltage)
5. Power 14 volt or 28 Volt
6. Slip Indicator
7. Colors & markings (for attitude indicators)
8. Mating connector
9. Quantity, monthly schedule, 1st delivery date

Movable Pointer

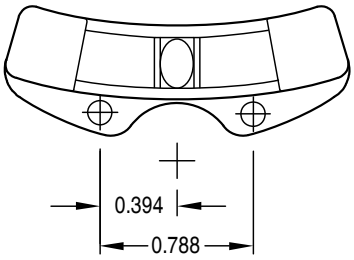
An instrument with a Movable pointer (Sky Pointer) has a **STATIONARY ROLL DIAL**, letting the pointer move the circumference of the face of the dial. It can move either clockwise or counter clockwise (See picture page 10).

Fixed Pointer

An instrument with a fixed pointer has a **ROTATING ROLL DIAL**, allowing all the painted dial parts to move and the pointer to stay stationary. The painted parts may roll in a clockwise or counter clockwise motion. (See picture page 10)

Optional Slip Indicator

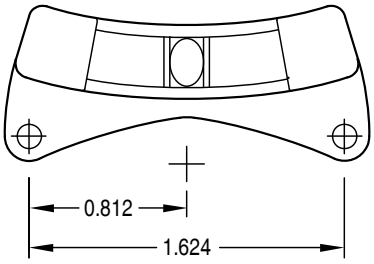
Add an Optional Slip Indicator to satisfy **FAA AC91-75**. Our slip indicator, **P/N 444-0010-01** can be used for all new RC Allen Attitude Indicators manufactured after March 4, 2011. All RCA2610 Digital Horizons use **P/N 444-0010-01**. For Electric and Vacuum Gyros manufactured before March 4, 2011, use **P/N 444-0011-01**. When ordering to retrofit an older instrument, refer to illustration below.



P/N 444-0010-01

USED ON ALL RCA2600 AND RCA2610 SERIES

USED ON ALL RCA26 SERIES
WITH MANUFACTURE DATE AFTER 03/04/2011



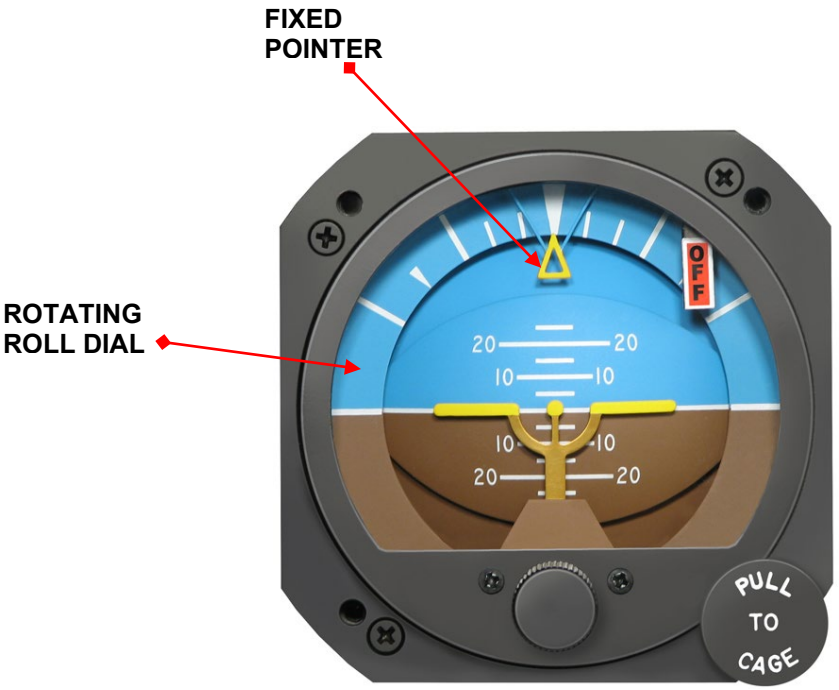
P/N 444-0011-01

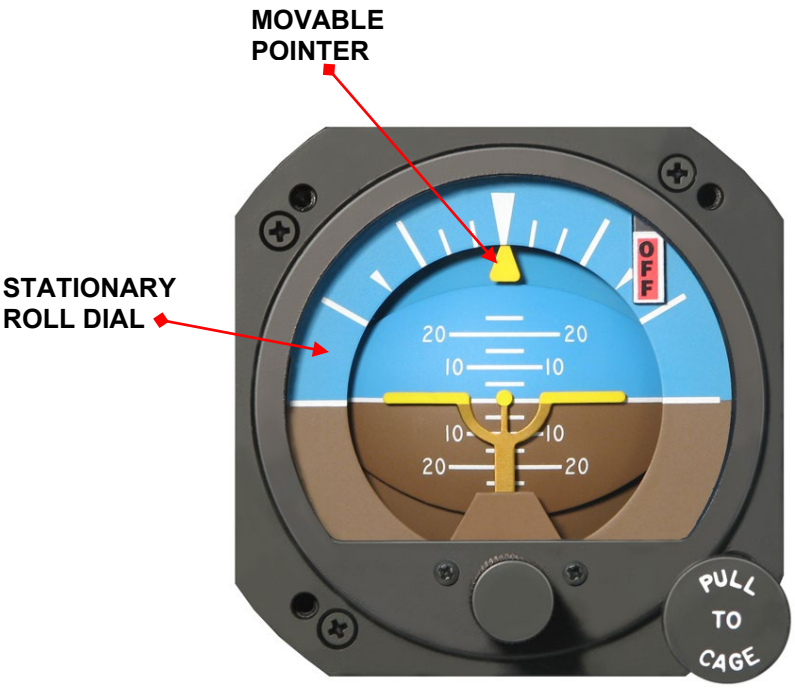
(REPLACES 444-0007-01)

USED ON ALL RCA26 SERIES
WITH MANUFACTURE DATE BEFORE 03/04/2011

*** Number of degrees that panel is tilted anywhere from 0° to 18°.
There is a charge of $200.00 for changing Panel Tilt Angle after the unit is manufactured.

FIXED AND MOVABLE POINTERS





RCA26EK SERIES
MULTI-VOLT ELECTRIC ATTITUDE INDICATOR

The **RCA26 Series** is the culmination of over 60 years of experience in the design of electric attitude indicators. We at RC ALLEN INSTRUMENTS strive continuously to offer the most reliable precision instruments on the market today.

The **RCA26EK Series** is a multi-volt instrument capable of operating from 10 to 30 volts. The circuit board has been recently upgraded to add a new multi-volt lighting feature. Because the instrument runs at such a low voltage, you can be assured your instrument is receiving the correct amount of voltage regardless of the input power.

For lighted **EK** instruments, the light voltage is handled through the circuit board which eliminates the need to specify the light voltage when ordering.

Like our **RCA26AK** and **RCA26BK** Series instruments you have a choice of a fixed or movable pointer, and lighted or non-lighted. Notice a difference from our standard Attitude Gyro? These bold colors are normally associated with our **RCA22** Series instruments.

Performance characteristics include Roll indication of 360°, Pitch ± 30° Pitch trim range ± 7°.

A slip indicator (PN 444-0010-01) can be added upon request.

ELECTRICAL REQUIREMENTS
Starting current @ 14 VDC: 3.4 A max
Running current @ 14 VDC: 1.7 A max
Starting current @ 28 VDC: 1.4 A max
Running current @ 28 VDC: 0.7 A max
Power consumption 1.7 A max
Lighting 3 A max
Power Failure Flag Actuation range:
Flag up @ 11 VDC ± 0.5 VDC
Flag down @ 10 VDC ± 0.5 VDC

DIMENSIONS
Length: 8.14 in. max.
Width: 3.38 in. max
Height: 3.38 in. max
Weight: 2.3 lbs.

CIRCUIT BREAKER
14 V Input: 4 A
28 V Input: 2 A

OPERATING TEMPERATURE: -30 TO +50 Degrees Celsius
WIRING RECOMMENDATION: Reference AC 43.13

PANEL TILT ANGLE MUST BE SPECIFIED AT TIME OF ORDER

RCA26EK-11

P/N 102-0084-05

Fixed pointer, unlighted, yellow airplane and pointer.

Connector pin-out:

A: GROUND MOTOR	B: SPARE
C: +12-30 VDC	D: SPARE

RCA26EK-12

P/N 102-0089-05

Fixed pointer, lighted, yellow airplane and pointer.

Connector pin-out:

A: GROUND MOTOR	B: GROUND LIGHTS
C: +12-30 VDC MOTOR	D: 0-28 V LIGHTS

RCA26EK-13

P/N 102-0090-04

Movable pointer, unlighted, yellow airplane and pointer.

Connector pin-out:

A: GROUND MOTOR	B: SPARE
C: +12-30 VDC	D: SPARE

RCA26EK-14

P/N 102-0091-04

Movable pointer, lighted, yellow airplane and pointer.

Connector pin-out:

A: GROUND MOTOR	B: GROUND LIGHTS
C: +12-30 VDC MOTOR	D: 0-28 V LIGHTS

PANEL TILT ANGLE MUST BE SPECIFIED AT TIME OF ORDER

These instruments meet or exceed requirements of **TSO C4c**
and Aeronautical Standard **AS396B**

RCA26 SERIES
Electric Attitude Indicator
AK (14V) AND BK (28V)

The **RCA26 Series** electric attitude indicator employs an electrically driven rotor to sense movement in the roll and pitch axis and transmits the information to the pilot through a pictorial presentation. They have a built-in inverter which converts aircraft DC power to the required AC voltage and frequency. All units have a pull cage knob and a power failure flag. Slip indicator (RCA 444-0010-01) can be added upon request.

RCA26AK ELECTRICAL REQUIREMENTS
Starting current @ 14 VDC: 2.4 A max
Running current @ 14 VDC: 1.21 A max

RCA26BK ELECTRICAL REQUIREMENTS
Starting current @ 28 VDC: 1.40 A max
Running current @ 28 VDC: 0.62 A

DIMENSIONS
Length: 8.14 in. max.
Width: 3.38 in. max
Height: 3.38 in. max
Weight: 2.3 lbs.

CIRCUIT BREAKER
RCA26AK: 3 A
RCA26BK: 2 A

PANEL TILT ANGLE MUST BE SPECIFIED AT TIME OF ORDER

These instruments meet or exceed requirements of **TSO C4c**
and Aeronautical Standard **AS396B**

RCA26AK-1

P/N 102-0053-02 (P/N 102-0053-01 With Inclinometer)
Standard look, 14 V, Lighted, Movable pointer,
Stationary roll dial.

Connector pin-out:
A: GROUND MOTOR
B: +14 VDC MOTOR
C: GROUND LIGHTS
D: +14 V LIGHTS

RCA26AK-2

P/N 102-0061-02 (P/N 102-0061-01 With Inclinometer)
Standard look, 14 V, Lighted, Fixed pointer,
Movable roll dial.

Connector pin-out:
A: GROUND MOTOR
B: GROUND LIGHTS
C: +14 VDC MOTOR
D: +14 VDC LIGHTS

RCA26AK-3

P/N 102-0066-02 (P/N 102-0066-01 With Inclinometer)
Standard look, 14 VDC, Movable pointer,
Stationary roll dial

Connector pin-out:
A: GROUND MOTOR
B: +14 VDC MOTOR
C: SPARE
D: SPARE

RCA26AK-4

P/N 102-0064-02 (P/N 102-0064-01 With Inclinometer)

Standard look, 14 VDC, Fixed pointer, Movable roll dial.

Connector pin-out:
A: GROUND MOTOR
B: +14 VDC MOTOR
C: SPARE
D: SPARE

PANEL TILT ANGLE MUST BE SPECIFIED AT TIME OF ORDER

These instruments meet or exceed requirements of **TSO C4c**
and Aeronautical Standard **AS396B**

RCA26BK-2

P/N 102-0051-02 (P/N 102-0051-01 With Inclinometer)
Standard look, 28 VDC, Lighted, Movable pointer, Stationary roll dial.

Connector pin-out:

A: GROUND MOTOR	B: GROUND LIGHTS
C: +28 VDC MOTOR	D: +28 VDC LIGHTS

RCA26BK-6

P/N 102-0057-02 (P/N 102-0057-01 With Inclinometer)
Standard look, 28 V, Fixed pointer, Movable roll dial.

Connector pin-out:

A: GROUND MOTOR	B: SPARE
C: +28 VDC MOTOR	D: SPARE

RCA26BK-8

P/N 102-0050-02 (P/N 102-0050-01 With Inclinometer)
Standard look, 28 V, Movable pointer, Stationary roll dial

Connector pin-out:

A: GROUND MOTOR	B: SPARE
C: +28 VDC MOTOR	D: SPARE

RCA26BK-9

P/N 102-0060-02 (P/N 102-0060-01 With Inclinometer)
Standard look, 28 V, Lighted, Fixed pointer, Movable roll dial.

Connector pin-out:

A: GROUND MOTOR	B: GROUND LIGHTS
C: +28 VDC MOTOR	D: +28 VDC LIGHTS

RCA26BK-12

P/N 102-0054-03 (5° Tilt) - P/N 102-0054-04 (0° Tilt)
28 V, Lighted, Movable pointer, fixed roll dial, Blue/brown display with black roll dial, White pointer and airplane.

Connector pin-out:

A: GROUND MOTOR	B: GROUND LIGHTS
C: +28 VDC MOTOR	D: +28 VDC LIGHTS

PANEL TILT ANGLE MUST BE SPECIFIED AT TIME OF ORDER

These instruments meet or exceed requirements of **TSO C4c** and Aeronautical Standard **AS396B**

RCA22 SERIES
VACUUM HORIZON INDICATOR

The **RCA22 Series** of vacuum horizon indicators are controlled by an air driven precision gyro to present the pilot with pitch and roll information. The attractive color scheme of blue sky and brown ground presents a realistic spherical display of flight. Unless otherwise indicated all instruments have a blue/brown display, fixed pointer and are lighted or unlighted (14 or 28 volts). This is our “Standard” display.

All **RC Allen** vacuum gyros run off of 4.5 in. Hg, erect time is 3 min. Instruments equipped with a warning flag will let you know when vacuum has dropped below 3.8 in. Hg. Flag retracts from view at 4.3 in. Hg. The 3 ⅜” X 3 ⅜” x 6” instrument fits in a standard 3 1/8 panel cutout. Weight of unit is 2.75 lbs. A ¼ -18 NPTF nylon tube slip fitting is recommended for vacuum hose installation. A 1/8 – 27 NPTF nylon tube slip fitting is recommended for vacuum gage installation.

The RCA22-11 model features internal lighting with bezel wiring.

R.C. Allen horizons can be ordered pre-adjusted to work with Panel Tilt Angle from 0° to 12°

PANEL TILT ANGLE MUST BE SPECIFIED AT TIME OF ORDER

RCA22-7
P/N 102-0041-04
Standard display.

RCA22-7F
P/N 102-0080-01
Standard display with warning flag.

RCA22-11
P/N 102-0071-03
Standard display and lighted.
Light voltage must be specified at time of order.

RCA22-11F
P/N 102-00801-05
Standard display, warning flag and lighted.
Light voltage must be specified at time of order.

RCA22-15
P/N 102-0074-03
Blue over black (AKA Piper/Cessna display).

PANEL TILT ANGLE MUST BE SPECIFIED AT TIME OF ORDER
These instruments meet or exceed requirements of **TSO C4c**
and Aeronautical Standard **AS396B**

RCA11A SERIES
VACUUM DIRECTIONAL GYRO

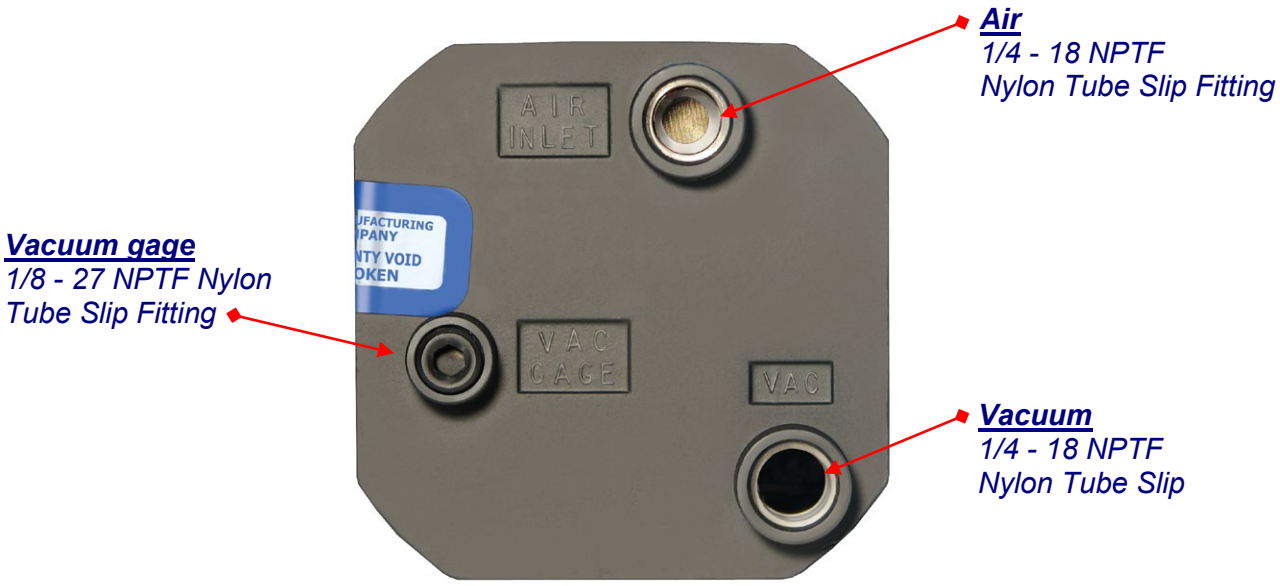
The **RCA-11A Series** of vacuum Directional Gyro utilizes an air driven precision gyro that controls a vertical rotating azimuth gimbal. The **RC Allen** Model **RCA11A** has been designed to provide a long life of accurate operation even when subjected to severe operating requirements. This instrument is engineered with a minimum of machined parts, providing lower initial cost and lower maintenance cost throughout its lifetime.

The **RCA11A** is non-tumbling within ±85° limits in pitch and roll and can be easily installed in any 3 ⅛″ panel cut out. Full freedom design allows accurate indication, even after extreme maneuvers. Stainless steel is used at wear points, with aluminum investment and die castings.

A knob is provided to reset the gyro, when compared to the magnetic compass. The **RCA11A-8** features our “Standard” display. Models with a vacuum failure flag will let you know when vacuum has dropped below 3.5 in. Hg.

- A 1/4 -18 NPTF nylon tube slip fitting is recommended for vacuum hose installation.
- A 1/8 - 27 NPTF nylon tube slip fitting is recommended for vacuum gage installation.

DIMENSIONS
Length: 6.7 in.
Height: 3.4 in.
Width: 3.4 in.
Weight 2.75 lbs



Meets or exceeds all requirements of **FAA TSO C5c**
and Aeronautical Standard **AS397**

RCA11A-8
P/N J8000-05
Standard display

RCA11A-8F
P/N J8000-05F
Standard display with flag

RCA11A-14
P/N J8000-10
Features Cardinal Heading markers N., S., E. & W.
(Cessna display)

RCA11A-15
P/N J8000-11
Features Cardinal Heading markers N., S., E. & W.
(Piper/Cessna display)

Meets or exceeds all requirements of **FAA TSO C5c**
and Aeronautical Standard **AS39**

RCA11A-15F
P/N J8000-11F
Features Cardinal Heading markers N., S., E. & W.
(Piper/Cessna display with flag)

RCA11A-16B
P/N 103-0034-02
14 VDC, lighted, standard display

RCA11A-17B
P/N 103-0034-01
28 VDC, lighted, standard display

Meets or exceeds all requirements of **FAA TSO C5c**
and Aeronautical Standard **AS397**

RCA11D SERIES
VACUUM DIRECTIONAL GYRO
WITH AUTOPILOT OUTPUT OR HEADING BUG ONLY

Autopilot output is compatible with S-TEC & Century Autopilots.

- A 1/4 -18 NPTF nylon tube fitting is recommended for vacuum hose installation.
- A 1/8 - 27 NPTF nylon tube fitting is recommended for vacuum gage installation.

DIMENSIONS:

Length: 7.4 in. Width: 3.4 in.
Height: 3.4 in. Weight 3.0 lbs

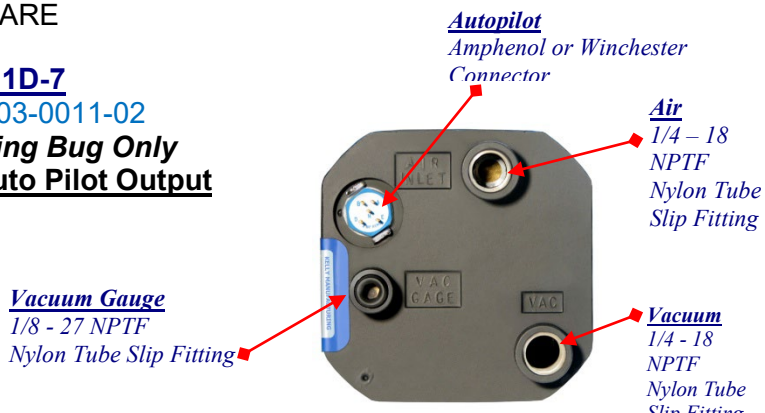
RCA11D-4
P/N 103-0011-01
Single pointer, 400 HZ, 5 K, Autopilot with heading bug.
Autopilot mating connector: Amphenol part number 126-223 or Winchester part number M5SH9C

Autopilot pin-out:
D: HDG SIG INPUT
B: HDG SIG INPUT COMMON
A: HDG SIG OUTPUT
E: HDG SIG OUTPUT COMMON
H: SPARE

RCA11D-5
P/N 103-0012-01
Dual Pointer Autopilot with Heading Bug. 400 HZ, 5 K, Autopilot mating connector: Amphenol part number 126-223 or Winchester part number M5SH9C

Autopilot pin-out:
D: HDG SIG INPUT
B: HDG SIG INPUT COMMON
A: HDG SIG OUTPUT
E: HDG SIG OUTPUT COMMON
H: SPARE

RCA11D-7
P/N 103-0011-02
Heading Bug Only
No Auto Pilot Output



Typical Vacuum Instrument with Autopilot

Meets or exceeds all requirements of **FAA TSO C5c**
and Aeronautical Standard **AS397**

RCA56 SERIES
ELECTRIC TURN & BANK
3 INCH INDICATORS

This rate-of-turn pointer controlled instrument is powered by an electrically driven DC precision gyro with an inclinometer. It gives the pilot turn and bank information. The **RCA56 Series** is an all-volt instrument that works from 11 to 30 volts dc. This is a 2-minute turn instrument, with a power warning flag, a black or white ball inclinometer and either lighted or non-lighted.

DIMENSIONS:
Length: 6 1/4 in. max.
Width: 3 3/8 in. max
Height: 3 3/8 in. max
Weight: 1.9 lbs.

Connector pin-out:
A: +11 to 30 volts
B: GROUND
C: SPARE

Recommended Circuit Breaker: 1 A

RCA56-3B
P/N 056-0024-03
11 to 30 VDC,
2-minute turn, Black inclinometer ball.

Mating connector: MS3106A10SL-3S

RCA56-3BL
P/N 056-0024-02
11 to 30 VDC, Lighted, Specify light voltage
2-minute turn, Black Inclinometer Ball.

Mating connector: MS3106A10SL-3S

Meets or exceeds requirements of **FAA TSO C3b**

RCA56-3W
P/N 056-0024-03
11 to 30 VDC,
2-minute turn, White inclinometer ball.

Mating connector: MS3106A10SL-3S

RCA56-3WL
P/N 056-0024-02
11 to 30 VDC, Lighted, Specify light voltage
2-minute turn, White Inclinometer Ball.

Mating connector: MS3106A10SL-3S

Meets or exceeds requirements of **FAA TSO C3b**

TACHOMETERS

Many years of experience were drawn upon in the design and development of these tachometers. Only the best time tested and field proven features were used. These instruments use a three-phase alternating current synchronous motor powered by a remote tach generator. The simplicity of design results in a twofold gain: **increased life and reliability** and **ease of overhaul**.

A large one-piece frame is a very effective heat sink – a very important feature in drawing heat away from the bearings. All intermediate gears and pointer shafts are suspended on precision jewel bearings. These indicators are qualified for many military applications and have successfully passed temperature, vibration and environmental testing that exceeds most OEM requirements. Housed in a 2 in. diameter hermetically sealed case, Standard ranges for Prop tachometers are 0 – 2000 or 0 – 4000. On the RCA41 percent tachometers the large pointer indicates 0 to 100% over 270° of pointer travel. Small pointer indicates in 1% increments on a 360° dial. Designed for use with a two-pole tach generator conforming to specification MIL-G-9398

DIMENSIONS:

2 in. diameter
Length: 5 in.,
Weight: .7 lbs.,

Power: Tach Generator, MIL–G–9398
Connector: MS3106-10SL-3S

RCA40A-06
P/N 100-0034-49
2 in. Prop Tachometer, Green Arc from 0 RPM to Red Line at 1700 RPM.

RCA40A-10
P/N 100-0034-57
2 in. Prop Tachometer, Green Arc from 0 RPM to Red Line at 2200 RPM.

RCA41A-07
P/N 100-0034-29
2 in. Percent Tachometer,
Type MU-1 (MIL 25623A)
Range 0-100% RPM

RCA41A-08
P/N 100-0034-50
2 in. Percent Tachometer, Green Arc from 560 RPM to Red Line at 1040 RPM.

RCA41A-15
P/N 100-0034-56
2 in. Percent Tachometer, Green Arc from 50% RPM to Red Line at 1001% RPM.
Replaces 3061000

3-INCH TACHOMETERS

DIMENSIONS:

3 in. diameter
Length: 5 in. max
Weight: 1.4 lbs.,

Power: Tach Generator, MIL–G–9398
Connector: MS3106-10SL-3S

RCA41-11A
P/N 100-0034-25
NSN6680-00-944-3117
3 in. Percent Tachometer,
Range: 0-110% RPM

CALL FOR AVAILABILITY

RCA41-11 (NO BEZEL)
P/N 100-0034-24
3 in. Percent Tachometer,
Range: 0-110% RPM

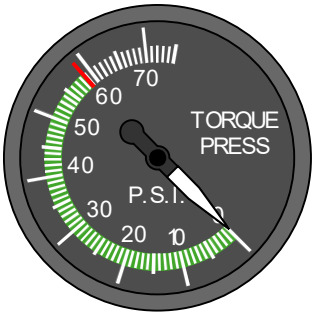
CALL FOR AVAILABILITY

TORQUE INDICATORS

Our Torque Indicators are a wet line, direct reading bourdon tube type instrument, housed in a 2 in. diameter case. Unit can be calibrated over a wide range of PSI input to direct read torque. Units can be furnished to your specifications. Indicate needed pressure input and pressure-to-torque conversion. This unit cannot be damaged by oil back up in vent line.

DIMENSIONS:
2 in. diameter
Length: 2.125 in.
Weight: 0.4 lbs

Power: Wet line direct reading pressure gage

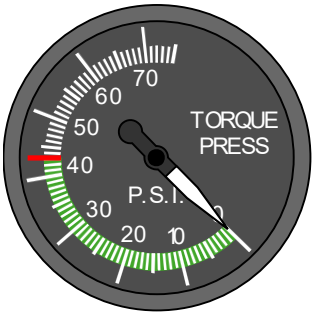


27-3007-3
0-75 PSI
Green Arc
From 0 to 58.7
Red Line at 58.7

27-3007-4
0 to 75 PSI
Green Arc
From 0 to 64.4
Red Line at 64.4

27-3007-5
0 to 75 PSI
Green Arc
From 0 to 53
Red Line at 53

27-3007-7
0 to 75 PSI



27-3007-10
0-75 PSI
Green Arc
From 0 to 43.3
Red Line at 43.3

OIL TEMP INDICATORS

Housed in a 2 in. diameter case, this instrument can be calibrated in C° or F°. Oil Temperature is sensed by a MS28034-1 resistance bulb.

DIMENSIONS:

Diameter: 2 in.
Length: 3.12 in.
Weight: 0.4 lbs
Power: 28 VDC

Connector: MS3112E8-4P

29-1004-10
Green Arc at 0° C to 110° C
Yellow Arc at -40° C to 0° C
Red Line at -40° and 110° C

Connector pin-out:
A: TEMPERATURE BULB
B: TEMPERATURE BULB GROUND
C: +28 VDC
D: GROUND

LOW VOLTAGE WARNING SYSTEMS

Amber light will come on at the moment of low voltage condition which will inform the pilot of attention needed to the alternator, generator, or voltage regulator. Any of these conditions allowed to continue will result in a weak or completely discharged battery condition and loss of radio and electrical equipment. Indicator light features a built-in dimmer and press to test with amber lens. Lights will trigger at 13 VDC for a 14-volt system and 25 VDC for a 28-volt system. Accuracy is plus or minus 0.2 VDC. Dimensions: 1/2 in. dia. and needs 3 in. clearance in rear of panel, Weight: 0.2 lb., Power: less than 1/10 A. Fuse supplied with kit.

33-2013A / 33-2025A

33-2013 / 33-2025

PART NUMBER	DESCRIPTION
33-2013A	14 V, Red lens
33-2013	14 V, Amber lens with dimmer
33-2025A	28 V, Red lens
33-2025	28 V, Amber lens with dimmer

Frequently Asked Questions

How long should my gyro last?
There are many factors that determine the life of a gyro. If a gyro sits stationary for a long period of time the bearings become unusable. If your vacuum hoses and filters are not replaced periodically the carbon dust from your vacuum pump can end up in your gyro. We have seen gyros with everything from corrosion from sea air to excessive bearing wear from rough landings. Ideally you should receive hundreds of hours of use, but it is completely dependent on how the unit is treated and the environment in which it is used.

How much vacuum is needed for my gyro to run properly?
Depending on the instrument - our vacuum Attitude Indicators have a minimum of 4.5 in Hg and our vacuum Directional Indicators have a minimum of 4 in Hg.

Should my vacuum gyro shake when powered up?
During the 3 minutes it takes for the gyro to “run up” you might see the instrument “shake” this is normal and will stop when the rotor reaches full speed. This does not mean your instrument is defective.

At what voltage level will my electric gyro become unreliable?
- For a 14 volt system a minimum of 11.2 VDC is required for the unit to operate accurately.
- For a 28 volt system a minimum of 22.4 VDC is required for the unit to operate accurately.

Our RCA26EK Series of instruments will operate in the 12-30 volt range allowing you to be secure in the knowledge that your instrument is receiving the correct amount of voltage regardless of the input power setting.

What is the recommended circuit breaker for my electric gyro?
The circuit breaker requirement is different for each model and aircraft voltage. See detailed circuit breaker requirements with each product description.

My instrument is showing a climb/dive what can I do?
You can check your aircraft owner’s manual or contact the aircraft manufacturer to determine if your aircraft’s panel is tilted (pitched fore and aft). The tilt angle is any deviation from vertical of your instrument panel in level flight. Your instrument needs to be calibrated to compensate for this angle.

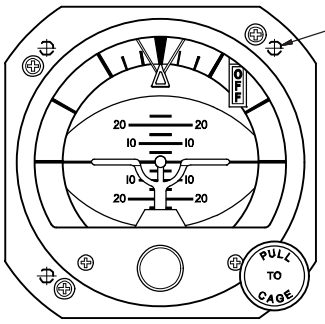
My instrument is showing a turn in level flight, what can I do?
It is also very important to have the instrument level (left and right tilt) in your panel. If the instrument is not level it will show a turn when in level flight. To level the instrument place an “L” level on the lip of the bezel at the bottom of the glass and adjust the instrument until the bubble is centered.

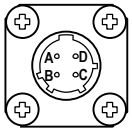
How do I get my instrument repaired?
For any overhaul or repair questions you can contact the Service Department at Kelly Manufacturing Company. The only thing really required is information. Send us your instrument along with a letter giving us your name, return shipping address, phone number and a brief description of what is wrong with the instrument. Send us an Email for more information at: service@kellymfg.com

Do you sell remanufactured instruments?
We do on occasion have remanufactured (we call them Overhaul Certified) instruments for sale. Please contact us for availability of instruments, as these are not items we build, but rebuild as they are given to us as cores.
Contact: sales@kellymfg.com

STANDARD PANEL CUTOUT PATTERNS FOR 3 INCH INSTRUMENTS

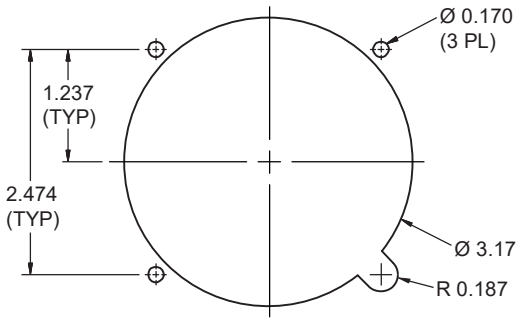
RCA26 SERIES ELECTRIC HORIZONS



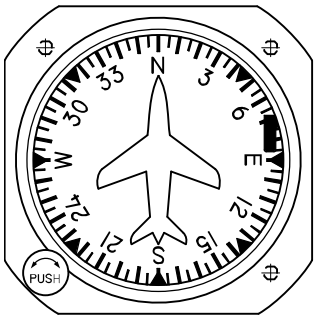


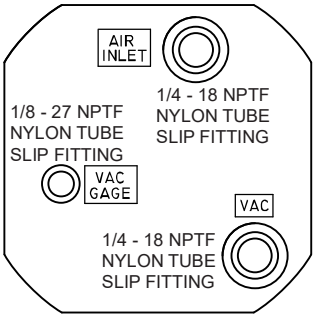
TYPICAL POWER PLUG PIN ID

NOTE:
See back of instrument for pin-out information.

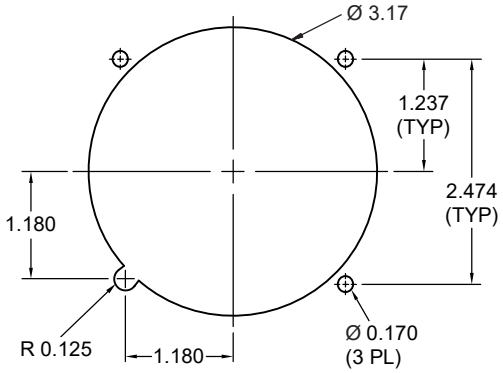


RCA11 SERIES VACUUM AND RCA15 SERIES ELECTRIC DIRECTIONAL GYROS

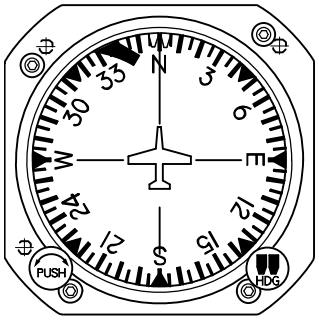




TYPICAL VACUUM FITTING SIZES

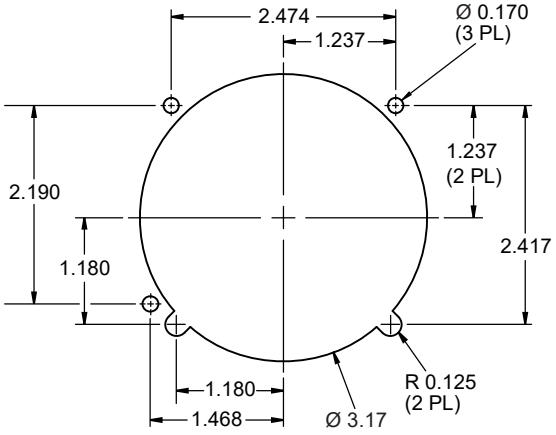
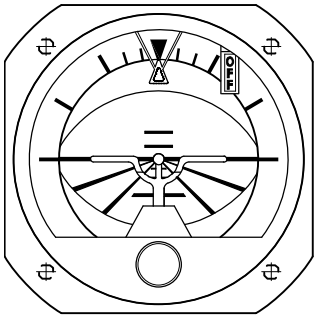
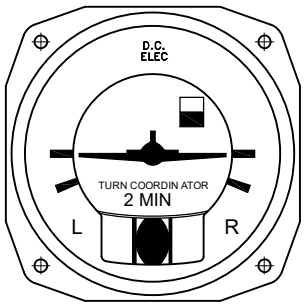
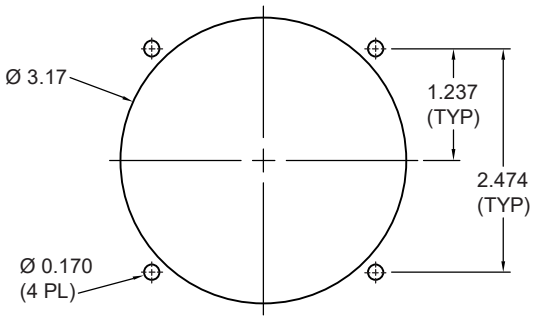


RCA11 SERIES VACUUM & RCA15 SERIES ELECTRIC DIRECTIONAL GYROS WITH AUTO PILOT



TYPICAL AUTOPILOT PLUG PIN ID

SEE OUR CATALOG FOR DETAILED INFORMATION



RCA2610-3P MINI6, RCA2610-3 DIGITAL HORIZON, RCA1510 DIGITAL HEADING INDICATOR, RCA8310 DIGITAL TURN COORD, RCA22 SERIES VACUUM HORIZON, RCA56 SERIES TURN & BANK AND RCA82 SERIES TURN COORDINATOR