FLY WITH THE BEST
rc allen instruments
PRODUCT CATALOG
2021

RCA2610-3

RCA1510-3

The Digital Duo!

Like us on Facebook
FLYRCALLEN

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

LEADERS IN AVIATION INSTRUMENTATION

January 2021
# TABLE OF CONTENTS

Contact Us........................................................................................................... page 2  
About Our Company............................................................................................. page 3  

**Digital Instruments**  
RCA2610 Electric Digital Attitude Indicator........................................ page 4  
RCA2610 Pitot-Static Electric Digital Attitude Indicator........................ page 8  
RCA1510 Electric Digital Heading Indicator............................................ page 11  

**Ordering Your Attitude Indicator** ............................................................. page 12  
Slip Indicator ..................................................................................................... page 12  

**Fixed and Movable Pointers Diagram** ....................................................... page 13  

**Electric Attitude Indicators**  
RCA26EK Series ........................................................................................ page 14  
RCA26AK & BK Series ............................................................................ page 16  

**Vacuum Horizon Indicators**  
RCA22 Series ............................................................................................ page 19  

**Directional Gyro, Electric**  
RCA15EK Series ........................................................................................ page 21  
RCA15AK & BK Series ............................................................................ page 23  

**Directional Gyro, Vacuum**  
RCA11A Series ............................................................................................ page 25  

**Autopilot Electric Directional Gyro**  
RCA15AK & BK Series ............................................................................ page 28  

**Autopilot Vacuum Directional Gyro**  
RCA11D Series ............................................................................................ page 30  

**Turn Coordinators (3 inch)** ................................................................. page 31  

**Turn and Bank Indicators (3 inch)** ........................................................... page 32  

**Tachometers (2 inch)** ............................................................................. page 34  
**Tachometers (3 inch)** ............................................................................. page 36  

**3-Inch Engine Gages** ............................................................................. page 37  

**Torque Indicator** .................................................................................... page 38  

**Oil Temp Indicator** ................................................................................ page 38  

**Ammeters** ................................................................................................ page 40  

**Emergency Products**  
ESP Battery Backup .................................................................................... page 41  
Low Voltage Warning System ..................................................................... page 43  

**Frequently asked questions** ..................................................................... page 44  

**Panel Cutout Patterns for 3-inch Instruments** ........................................ page 45
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Like us on Facebook: www.facebook.com/flyrcallen/
Visit our Web Page at: www.kellymfg.com
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 instruments for a variety of military and general aviation aircraft. With the introduction of the RCA 2600 Digital Attitude Indicator and the Emergency Standby Power (ESP) battery backup, KMC stays on the cutting edge of aviation technology and safety.
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 also comes with an optional Internal Battery Backup. All models come 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:
- New Digital Slip Indicator
- New 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 Certified.
- TWO-YEAR WARRANTY

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 3-Inch 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

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**

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<th>OPTIONAL FEATURES</th>
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* Represents Manufacturer’s Choice: Best value and lead times.

**RCA2610-2 (2-INCH) With Pitch Sync**

<table>
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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.

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

All features shown.

MODEL RCA2610-3-G (3-INCH) NO PITCH SYNC

<table>
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MODEL RCA2610-2-G (2-INCH) NO PITCH SYNC

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* 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.

January 2021
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**

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**

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

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

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* 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

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

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

All features shown.

### MODEL RCA2610-2P-G PITOT STATIC NO PITCH SYNC

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Mating Connector: (MS3116E8-4S) & panel screws included.

The Panel Tilt Angle is pre-set and must be specified at time of order.
Our RCA1510 Series Digital Heading Indicator is the latest addition to our Digital Instrument Lineup. It is the perfect companion to the RCA2610 Digital Attitude Indicator.

The RCA1510 is designed as a fully FAA Certified direct replacement for your mechanical Directional Gyro. It is totally self-contained and fits in a standard 3-inch panel cut-out. There are no special external connections other than power and an external GPS antenna (SMA antenna connection). Its multi-volt function allows installation in both 14-Volt and 28-Volt systems.

The RCA1510 combines data from its own internal magnetometer and GPS unit for a more stable and accurate heading reading which also eliminates the need to “cage” or “zero” the instrument.

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 work without GPS input if the GPS signal is lost.

The highly visible screen has adjustable brightness controls. It has a traditional rotating dial display with digital numeric headings. The pilot can adjust the Heading Bug just like a mechanical instrument or use the Quick-Set Heading Bug; a double-push of the HDG knob sets the Bug to the current heading.

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

**DIMENSIONS RCA1510-3**
- Length: 1.7 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**
- Quick-Set Heading Bug
- GPS Input Enhanced
- 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 (3-inch)**
- P/N 103-0503-03-01
- 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.

*The Panel Tilt Angle is set at the factory and must be specified at time of order.*
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.

*** 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

Rotating Roll Dial

Fixed Pointer

Movable Pointer

Stationary Roll Dial
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**
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 ¾” X 3 ¾” 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.

Vacuum
1/4 - 18 NPTF nylon tube slip fitting

Vacuum gage
1/8 – 27 NPTF nylon tube slip fitting

Air
1/4 - 18 NPTF nylon tube slip fitting.

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
RCA15EK SERIES
MULTI-VOLT ELECTRIC DIRECTIONAL GYRO

Matched companion to model RCA26EK Series horizons

The RCA15EK Series is the latest version of our Electric Directional Gyros. We strive continuously to offer the most reliable precision instruments on the market today.

The RCA15EK Series is a multi-volt instrument capable of operating from 10 to 30 volts dc. Because of the lower running voltage, the RCA15EK will operate safely in a larger range of input power for greater safety and reliability.

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

May be used in both fixed wing and rotor wing aircraft and is easily installed in standard 3 1/8” panel cutout. Power failure flag drops into view when supply voltage is lost or has dropped below proper operation voltage of the gyro.

- Azimuth indication range: 360°.
- Altitude operation: 1,000 to 40,000 feet.
- Internal 3 phase inverter produces high starting torque and increases gyro rotor speed.
- Internal lighting provides even light distribution at any intensity level.
- Calibrated to an accuracy of 3° maximum drift error after 10 minutes of ± 1.5° Scorsby motion.

ELECTRICAL REQUIREMENTS

<table>
<thead>
<tr>
<th>14 VDC</th>
<th>28 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting Current</td>
<td>3.4 A max</td>
</tr>
<tr>
<td>Running Current</td>
<td>1.7 A</td>
</tr>
<tr>
<td>Recommended Circuit Breaker</td>
<td>4 A</td>
</tr>
</tbody>
</table>

DIMENSIONS

Length: 6.7 in.
Width: 3.4 in.
Height: 3.4 in.
Weight: 2.3 lbs

Meets or exceeds all requirements of FAA TSO C5c and Aeronautical Standard AS397
**RCA15EK-1**  
P/N 103-0041-01  
10 to 30 VDC, Lighted,  
Mating connector MS3116E8-4S.  

**Connector pin-out:**  
A: GROUND MOTOR  
B: GROUND LIGHTS  
C: +12-30 VDC MOTOR  
D: +12-30 V LIGHTS

**RCA15EK-2**  
P/N 103-0042-01  
10 to 30 VDC  
Mating connector MS3116E8-4S  

**Connector pin-out:**  
A: GROUND MOTOR  
B: SPARE  
C: +12-30 VDC MOTOR  
D: SPARE

Meets or exceeds all requirements of FAA TSO C5c and Aeronautical Standard AS397
RCA15 SERIES
ELECTRIC DIRECTIONAL GYRO
AK (14V) & BK (28V)

Matched companion to model RCA26 Series horizons

The RCA15 Series Electric Directional Gyro employs an electrically driven gyro motor and is a direct reading, azimuth indicator. Rotor run up time is 3 minutes. They have a built-in inverter which converts aircraft DC power to the required AC voltage and frequency. May be used in both fixed wing and rotor wing aircraft and is easily installed in standard 3 1/8” panel cutout. Power failure flag drops into view when supply voltage is lost or has dropped below proper operation voltage of the gyro.

- Azimuth indication range: 360°.
- Altitude operation: 1,000 to 40,000 feet.
- Internal 3 phase inverter produces high starting torque and increases gyro rotor speed.
- Internal lighting provides even light distribution at any intensity level.
- Calibrated to an accuracy of 3° maximum drift error after 10 minutes of ± 1.5° Scorsby motion.

**ELECTRICAL REQUIREMENTS**

<table>
<thead>
<tr>
<th></th>
<th>14 VDC</th>
<th>28 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting Current</td>
<td>2.4 A max</td>
<td>1.4A max</td>
</tr>
<tr>
<td>Running Current</td>
<td>1.2 A</td>
<td>0.6 A</td>
</tr>
<tr>
<td>Recommended Circuit Breaker</td>
<td>3 A</td>
<td>2 A</td>
</tr>
</tbody>
</table>

**DIMENSIONS**

- Length: 6.7 in.
- Width: 3.4 in.
- Height: 3.4 in.
- Weight: 2.3 lbs.

Meets or exceeds all requirements of FAA TSO C5c and Aeronautical Standard AS397
RCA15 SERIES
ELECTRIC DIRECTIONAL GyRO
AK (14V) & BK (28V)

RCA15AK-1
P/N 103-0025-01
14 VDC, Lighted,

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

RCA15AK-2
P/N 103-0027-01
14 V,

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

RCA15BK-1
P/N 103-0022-01
28 VDC, Lighted,

**Connector pin-out:**
A: GROUND MOTOR
B: GROUND LIGHTS
C: +28 VDC MOTOR
D: +28 VDC LIGHTS

RCA15BK-2
P/N 103-0023-01
28 VDC,

**Connector pin-out:**
A: SPARE
B: SPARE
C: +28 VDC MOTOR
D: GROUND MOTOR

Meets or exceeds all requirements of FAA TSO C5c and Aeronautical Standard AS397
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
RCA15 SERIES
ELECTRIC DIRECTIONAL GYRO
WITH AUTOPILOT OUTPUT OR HEADING BUG ONLY
AK (14V) & BK (28V)

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

CHECK WITH YOUR SALES REPRESENTATIVE TO MAKE SURE THE UNIT YOU ARE BUYING IS COMPATIBLE WITH YOUR AUTOPILOT SYSTEM BEFORE PLACING YOUR ORDER.

- Push-to-Set knob
- Power Failure flag
- 14 and 28 volt models
- AC brushless motor
- Un-lighted
- Heading Bug or 400HZ, 5K autopilot output

► Customer will need to specify Autopilot output at time of order.

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

ELECTRICAL REQUIREMENTS

<table>
<thead>
<tr>
<th></th>
<th>14 VDC</th>
<th>28 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting Current</td>
<td>2.4 A max</td>
<td>1.4 A max</td>
</tr>
<tr>
<td>Running Current</td>
<td>1.2 A</td>
<td>0.6 A</td>
</tr>
<tr>
<td>Recommended Circuit Breaker</td>
<td>3 A</td>
<td>2 A</td>
</tr>
</tbody>
</table>

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

RCA15AK-16
RCA15AK-16
P/N 103-0038-01
14 VDC, 400Hz, 5K. Mating connector MS3116E8-4S
Autopilot mating connector: Amphenol part number 126-223 or Winchester part number M5SH9C.

**Connector pin-out** | **Autopilot pin-out**
--- | ---
A: GROUND MOTOR | D: HDG SIG INPUT
B: +14 VDC MOTOR | B: HDG SIG INPUT COMMON
C: SPARE | A: HDG SIG OUTPUT
D: SPARE | E: HDG SIG OUTPUT COMMON

RCA15BK-16
P/N 103-0037-01
28 V, 400Hz, 5K. Mating connector MS3116E8-4S
Autopilot mating connector: Amphenol part number 126-223 or Winchester part number M5SH9C.

**Connector pin-out** | **Autopilot pin-out**
--- | ---
A: SPARE | D: HDG SIG INPUT
B: SPARE | B: HDG SIG INPUT COMMON
C: +28 VDC MOTOR | A: HDG SIG OUTPUT
D: GROUND MOTOR | E: HDG SIG OUTPUT COMMON

**HEADING BUG ONLY**

RCA15AK-17
P/N 103-0038-02
14 VDC, **Heading bug only**. Mating connector MS3116E8-4S
No Auto Pilot Output

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

RCA15BK-17
P/N 103-0037-02
28 VDC, **Heading bug only**. Mating connector MS3116E8-4S
No Auto Pilot Output

**Connector pin-out**
---
A: SPARE
B: SPARE
C: +28 VDC MOTOR
D: GROUND MOTOR

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

Meets or exceeds all requirements of FAA TSO C5c and Aeronautical Standard AS397
TURN COORDINATOR
3 INCH INDICATORS

This instrument contains an electrically driven gyroscope supported in a gimbal inclined to the horizon so that the instrument senses roll as well as yaw. The RCA82A Series is an all-volt instrument that works from 11 to 30 volts DC. The movement is presented by an airplane symbol banking on a fixed horizon with a power warning flag.

**DIMENSIONS:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length:</strong></td>
<td>6 1/2 in. max.</td>
</tr>
<tr>
<td><strong>Width:</strong></td>
<td>3 3/8 in. max.</td>
</tr>
<tr>
<td><strong>Height:</strong></td>
<td>3 3/8 in. max.</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>1.9 lbs</td>
</tr>
</tbody>
</table>

Recommended Circuit Breaker: 1 A

**RCA82A-11**
P/N 100-0037-02
11 to 30 VDC,

*Mating connector:*
MS3106A-10SL-3S

*Connector pin-out:*
A: +12 to 30 VDC
B: GROUND
C: SPARE

**RCA83A-11**
P/N 100-0030-05
11 to 30 VDC, Lighted

Specify light voltage

*Mating connector:*
MS3106A-10SL-3S

*Connector pin-out:*
A: +12 to 30 volts
B: GROUND
C: SPARE

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

*Remember to level the instrument in the panel*
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
3 INCH ENGINE GAGES
18-1000 SERIES

This gage consists of three independent gages contained within a standard 3 in. diameter case. Oil temperature and cylinder head temperature gages are moving coil meter movement operated by MS28034-1 and AN5546-1 resistance bulbs respectively. Connection for the temperature gage is by cannon type connector: P/N MS3106A-14S-2S. FAA TSO Approved C47.

18-1000-1
28 VDC
Oil Temperature range from 50° to 250°F
Oil Pressure range from 0 to 200 PSI
Cylinder head temperature from 100 to 500°F

CALL FOR AVAILABILITY

18-1000-3
14 VDC
Oil Temperature range from 50° to 250°F
Oil Pressure range from 0 to 200 PSI
Cylinder head temperature from 100 to 500°F

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
  - Green Arc
  - From 0 to 43.3
  - Red Line at 43.3

- **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
AMMETERS
12-1200 Series

Moving coil type, designed for aircraft use. Requires external 50 MV shunt (12-902 series).

**Dimensions:**
- Diameter: 2 in.
- Length: 2 in.
- Weight: .4 lbs approx.
- Power: 14 or 28 VDC.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-1200-1</td>
<td>30-0-30</td>
</tr>
<tr>
<td>12-1200-2</td>
<td>60-0-60</td>
</tr>
<tr>
<td>12-1200-3</td>
<td>120-0-120</td>
</tr>
<tr>
<td>12-1200-4</td>
<td>80-0-80</td>
</tr>
<tr>
<td>12-1200-5</td>
<td>480-0-480</td>
</tr>
<tr>
<td>12-1200-6</td>
<td>150-0-150</td>
</tr>
<tr>
<td>12-1200-7</td>
<td>250-0-250</td>
</tr>
<tr>
<td>12-1200-8</td>
<td>100-0-100</td>
</tr>
<tr>
<td>12-1200-9</td>
<td>200-0-200</td>
</tr>
</tbody>
</table>

CALL FOR AVAILABILITY
The ESP - Emergency Standby Power, is a Battery-based Power Unit (BPU) designed to give you at least an hour of auxiliary power when you need it the most. Paired with the new RCA2610 Digital Attitude Indicator and the RCA1510 Digital Heading Indicator, the ESP can provide up to 5 hours of backup power. The ESP can be easily mounted behind the instrument panel to power your new R.C. Allen instrument, or retrofit your existing electric indicator.

The ESP comes complete with a wire harness and panel-mounted status light. Maintenance is easy, it recharges itself during flight and does not drain the aircraft battery when aircraft power is off. The ESP utilizes a long-lasting lithium polymer battery - the same kind found in most laptop computers.

- EASY TO INSTALL
- ONE HOUR OF EMERGENCY POWER
- PANEL MOUNTED STATUS LIGHT
- RETROFIT EXISTING INSTRUMENTS
- COMPACT DESIGN
- FAA TSO-C179 & DO-160F APPROVED

**BATTERY POWER UNIT**
- Voltage In: 14 or 28 VDC
- Voltage Out: 14 or 28 VDC
- Circuit Breaker Size:
  - 28 VDC load: 2 A
  - 14 VDC load: 3 A
- Weight: 12.5 ounces
- Operating Temperature Range: -30º to +50º C
- Location: Inside cabin bulkhead

**BATTERY**
- Nominal Voltage: 14/28 V
- Battery Type: 7.4 V, 2300 mAh Li-PO Lithium Polymer

**ILLUMINATED STATUS SWITCH**
- Light Source: 2 LED lights
- Dimensions: 0.70 x 0.70 in.
- Location: Panel mounted
- Panel Hole: 5/8 in. diameter

**PERFORMANCE**
- Rated Capacity:
  - Mechanical Instrument: 60 Minutes
  - Electronic Instrument: 5+ Hours
- Maintenance: Replace battery every 3 years

**QUALIFICATIONS**
- Minimum Performance Standard: FAA TSO-C174
- Environmental Qualification: DO-160F
**NOTE**

The harness is designed to be specific to the instrument used and aircraft voltage. The correct harness should be selected at time of order. Using the wrong harness will result in voiding the warranty. See below chart for proper harness.

## HARNESS COMPATIBILITY CHART

<table>
<thead>
<tr>
<th>HARNESS P/N</th>
<th>SYS VOLTAGE</th>
<th>USED ON</th>
<th>PIN-OUT</th>
</tr>
</thead>
</table>
| 702-0028-01 | 28 VDC      | RCA26BK-2, -3, -6, -7, -8, -9, -10, -11, -12, -14, -15, -16, -18, -20, -22, -26, -28, -29, -30, -32, -34, -35, -36, -37 | A = GND  
B = GND (lights)  
C = POS  
D = POS (lights) |
|             |             | RCA26EK-10 |                          |
|             |             | RCA2600-2, -3 |                          |
|             |             | RCA2610-2, -3 |                          |
|             |             | RCA1510-3 |                          |
| 702-0028-02 | 28 VDC      | RCA26AK-1, -3, -4, -6, -7, -8   | A = GND  
B = POS  
C = GND (lights)  
D = POS (lights) |
|             |             | RCA 26EK-10 |                          |
|             |             | RCA2600-2, -3 |                          |
|             |             | RCA2610-2, -3 |                          |
|             |             | RCA1510-3 |                          |
| 702-0014-01 | 14 VDC      | RCA26AK-2, -5   | A = GND  
B = GND (lights)  
C = POS  
D = POS (lights) |
|             |             | RCA26EK-1, -2, -3, -4, -5, -6, -7, -8, -9, -11, -12, -13, -14 |                          |
| 702-0014-02 | 14 VDC      | RCA26AK-2, -5   |                          |
|             |             | RCA26EK-1, -2, -3, -4, -5, -6, -7, -8, -9, -11, -12, -13, -14 |                          |
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.

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>33-2013A</td>
<td>14 V, Red lens</td>
</tr>
<tr>
<td>33-2013</td>
<td>14 V, Amber lens with dimmer</td>
</tr>
<tr>
<td>33-2025A</td>
<td>28 V, Red lens</td>
</tr>
<tr>
<td>33-2025</td>
<td>28 V, Amber lens with dimmer</td>
</tr>
</tbody>
</table>
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

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

RCA11 SERIES VACUUM AND RCA15 SERIES ELECTRIC DIRECTIONAL GYROS

TYPICAL VACUUM FITTING SIZES

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

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

SEE OUR CATALOG FOR DETAILED INFORMATION

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

January 2021