

# COLUMBIA™

## Owner's Manual

### 1984 • Electric Golf Car

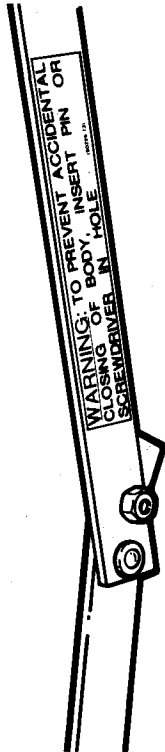
- 3-Wheel Classic
- 4-Wheel Cruiser
- 4-Wheel Challenger



**COLUMBIA**  
One Golf Car Road • P.O. Box 1  
Deerfield, WI 53531 • (608) 764-5474

# WARNING

To secure the body upright and avoid possible personal injury on Classic and Cruiser models, install a 3/8 x 1 bolt and nut into body hinge hole to prevent accidental closing of body.



## PATENT NOTICE

Columbia Car products are manufactured under one or more of the following: U.S. Patents — 2986162, 2987934, 2998809, 3116089, 3144631, 3144860, 3226994, 3229792, 3434887, 3559773, 3673359, 3680403, 3683716, 3709317, Des. 225 626.

To the best knowledge of Columbia Car Corporation, the material contained herein is accurate as of the date this publication was approved for printing. Columbia Car Corporation reserves the right to change specifications, equipment, or designs at any time without notice and without incurring obligation.

COLUMBIA CAR CORPORATION

# INTRODUCTION

This manual contains important safety information, operating instructions, model specifications and maintenance instructions for the 3-Wheel Classic, 4-Wheel Cruiser and 4-Wheel Challenger Electric Golf Cars.

The service information in this manual is limited to care and maintenance information only. Information covering repairs is provided in a detailed service manual available from Columbia Car dealers. Such major repairs require the attention of a skilled mechanic and the use of special tools and equipment. Your Columbia Car dealer has the facilities, experience and genuine Columbia Car parts and accessories to properly service Columbia Cars.

For convenience, the SAFE OPERATING RULES and CONTROLS AND OPERATIONS are printed side by side in the manual and are of particular importance for operator safety. These pages should be copied or reprinted and given to anyone operating the golf car.

## MODEL IDENTIFICATION

The vehicle identification number is located on a metal tag above the left rear tire on the rear frame cross brace on the Classic and Cruiser, and under the drivers seat on frame bulkhead on the Challenger.

**IMPORTANT!** Always give this number when ordering parts or making inquiries about your Columbia Car.

Statements in this manual preceded by the following words are of special significance:

### WARNING

Means there is the possibility of personal injury to yourself or others.

### CAUTION

Means there is the possibility of damage to the vehicle.

We recommend you take special notice of these items.

### WARNING

The modification of Columbia golf cars for use in other than golf play is not recommended. Exceeding golf car load capacities, recommended speed or altering the golf car for other than golf play may result in possible injury or property damage.

# SAFE OPERATING RULES

Before operating the Columbia Golf Car, it is the operator's responsibility to read and follow the safety, operating and maintenance instructions in this manual for personal safety. If you are responsible for the use or rental of the golf car, it is your responsibility to inform the person or persons using the golf car about the following basic rules of operation for their personal safety.

- Vehicles designed as golf cars should be used for that purpose only.
- It is hazardous to use golf cars anywhere other than on designated car paths and car areas.
- Golf cars are designed for transporting no more than two golfers and their equipment. Never exceed load capacity, or vehicle stability and control will be endangered.
- Always drive vehicle straight up and down inclines to avoid overturning vehicle or losing vehicle stability and control. Be cautious while turning or backing up vehicle.
- Personal injury may result if arms, legs, or other parts of body are not kept inside vehicle while it is moving.
- Do not start vehicle until all occupants are seated. Remain seated while vehicle is in motion.
- **Before leaving your seat, bring vehicle to a complete stop and lock parking brake to prevent vehicle from moving.** If vehicle is to be left unattended, switch key OFF and remove key.
- Do not use accelerator to hold car on an incline — use the brake.
- Make sure key is in position for desired direction of travel before depressing accelerator. **DO NOT CHANGE DIRECTION OF CAR WHILE MOVING!**

## WARNING

**Failure to comply with the above instructions may result in bodily injury and property damage.**

These basic rules of operation, combined with courtesy and common sense will help to make driving the Columbia Golf Car a safe and pleasant experience.

# CONTROLS AND OPERATION

Simple controls make it easy to operate the Columbia Golf Car. To drive, move directional key switch to desired position and depress accelerator with right foot. Depress brake pedal to slow or stop car.

## WARNING

**Be sure directional key switch is in desired direction of travel before depressing accelerator.**

## DIRECTIONAL KEY SWITCH

The switch requires key to operate. Turn to FORWARD position to run car forward. Turn to REVERSE position to run car in reverse. Warning buzzer sounds when in reverse. Key can only be removed when in the OFF position. Switch locks automatically when key is removed. **DO NOT CHANGE DIRECTION UNTIL CAR HAS COME TO A COMPLETE STOP.**

## ACCELERATOR

Accelerator pedal operates the Golf Car in selected speeds as pedal is depressed. With key in desired position, depress accelerator to operate car in desired direction.

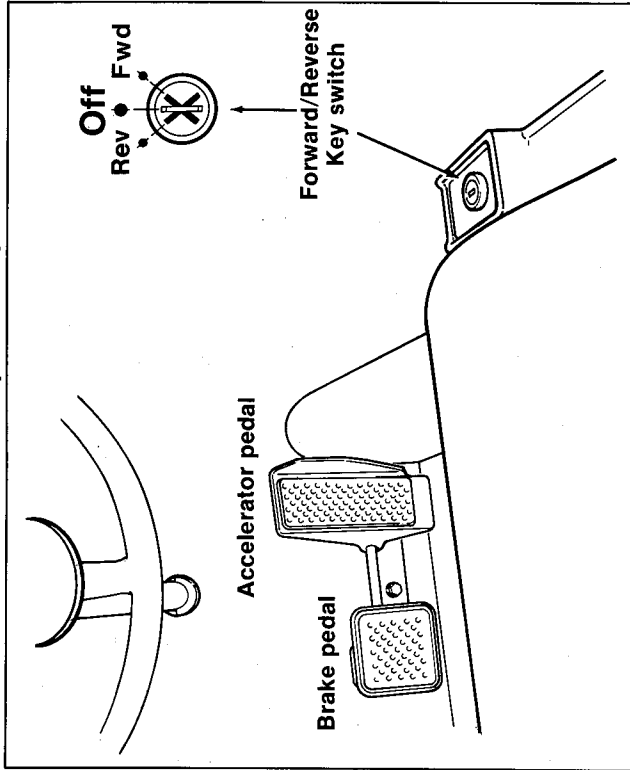
## BRAKE

Depress brake pedal to slow or stop vehicle. To lock brake for parking, depress pedal and tilt forward. **Always apply parking brake when leaving vehicle.** Parking brake remains applied until automatically released by depressing accelerator pedal. Parking brake can also be released by tilting brake pedal backward.

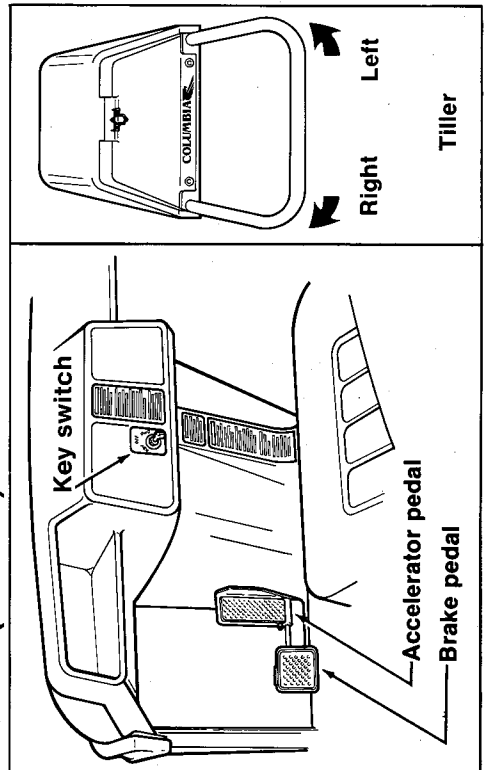
## STEERING AND CONTROLS

- 3-wheel models may be ordered with steering tiller or steering wheel.
- 4-wheel models are equipped with a steering wheel.

### Challenger and Cruiser (4-Wheel)



### Classic (3-Wheel)



## TRAILERING GOLF CAR

### WARNING

When trailering golf car observe the following safety precautions:

- Use trailer specifically designed to carry golf cars.
- Secure golf car to trailer following trailer manufacturer's instructions.
- On golf cars equipped with windshields or suntop, be certain windshield or suntop is secured properly to golf car to prevent loss or damage while trailering. Also secure golf car body to chassis as it may raise as a result of air flow on suntop while trailering. Increased trailering speed adds stress to windshield or suntop and subsequently increases chance of loss or damage.

## GOLF CAR SERVICING

Performance and quality has been designed into every Columbia Car. Continued dependable and trouble free service depends primarily on the care and attention given.

Special attention must be given to the maintenance requirements of golf cars in fleets or rental use. Consult your Columbia Car dealer for maintenance requirements of fleet operation.

Use the following charging time chart as a guide for maintaining batteries in top condition. The detailed service procedures are outlined in service manuals available from your Columbia Car dealer.

### NOTE

*For optimum battery performance, limit the use of new batteries to 18 holes between charges for first 5 charging cycles.*

### CHARGING TIME CHART

Using manually timed charger  
70° F (20° C)

GOLF CAR USAGE	CHARGING TIME
9 Holes	7 Hours
18 Holes or More	12 Hours

#### NOTE

Charging times to fully charge batteries vary with differences in temperature. Cold temperature requires longer charge times.

To service batteries, speed switch, motor or brakes on Classic and Cruiser models, lift body up.

To service batteries, speed switch, motor or brakes on the Challenger, remove bag wells and/or tilt seats forward. Major repairs of the Challenger may require removal of body.

#### WARNING

Always disconnect the two negative battery cables which run to the master drive solenoids from the batteries before performing any golf car service to avoid accidental start-up of vehicle and possible personal injury.

## SERVICE CHART

Use the following service check chart as a guide for maintaining your Columbia Golf Car in top operating condition.

### DAILY

#### Batteries

- Fully charge batteries after each usage as shown in chart. Charging receptacle is located on front side of rear body between seats. Be sure key switch is off, key removed from switch and accelerator pedal released.

#### WARNING

Batteries give off hydrogen gas which is highly explosive! DO NOT allow flame or sparks near charging area when charging. Charging area must be well ventilated.

#### WARNING

Batteries contain sulphuric acid. Avoid contact with skin, eyes or clothing.

#### Antidote

External — Flush with water.

Internal — Drink large quantities of milk or water followed by milk of magnesia, vegetable oil, or beaten eggs. Call doctor immediately.

Eyes — Flush with water and get immediate medical attention.

## AS NECESSARY OR EVERY WEEK

### Batteries

- Check electrolyte level. Fill to marker in each cell with distilled water or water low in mineral content after charging.
- Keep terminals and top of batteries clean to reduce battery discharge.

### Cleaning

- Wash underside of car to remove all dirt and debris.
- Wash body and seats with a mild detergent only. DO NOT use abrasives (bodies are painted).

## EVERY MONTH, 24 HOURS OPERATING TIME OR 32 ROUNDS

### Brake

- Adjust brake as follows when brake pedal free travel becomes excessive. Remove brake cable from front brake shoe. Adjust lever adjusting bolt until brake pads bear lightly on brake disc. Apply force to brake cam lever engaging the brake pads tightly against the disc. Adjust pivot bolt until the brake shoes are parallel to the disc. Release brake cam, remove cotter pin and adjust the castle nut on the rear brake shoe until a maximum of .030 in. (0.75 mm) side clearance, .015 in. (0.4 mm) on each side is achieved between each brake shoe and the disc. Install cotter pin. Adjust cable length until the brake cable can be reinstalled without engaging or disengaging the brake. (See Service Manual for detailed brake adjustment procedure.)
- Lubricate brake cable annually in conjunction with brake adjustment. Pull back spring on caliper end of cable and lube cable with good quality grease.

## Tires

- Check pressure and inflate to 18 psi (1.2 atm).

## Electrical

- Clean speed switch mechanism with a spray CLEANING SOLVENT - DEGREASER. Check condition of speed switch contacts — clean or replace as required. **DO NOT** apply grease to contacts.
- Check terminal connections and battery connections. Tighten and clean as required.

## Lubrication

- Oil body hinges and braces (Classic and Cruiser only).
- Grease front suspension fitting (2 on 3-wheel, 4 on 4-wheel).
- Check differential and fill with APG 75 Lightweight Gear Lubricant as required to maintain level 1/2 in. (13 mm) below filler opening.

## EACH SEASON

Perform all monthly service operations in addition to the following:

- Lubricate speed switch pivot shaft and support plate guide surface with Loctite® ANTI-SEIZE. **DO NOT** apply any lubricant to speed switch contacts.
- Lube brake shoe operating cam with Loctite® ANTI-SEIZE.

### WARNING

**Do not get ANTI-SEIZE on brake pads or disc. ANTI-SEIZE is an anti-friction material, and if allowed to contact brake pads or disc, may result in brake loss.**

- On steering wheel equipped cars, check steering gear box lubricant level. Remove filler plug and fill with API Service GL5 Multipurpose Gear Lubricant APG 90.
- Clean, inspect and repack front wheel bearings with a water resistant Multipurpose Bearing Grease.

## STORAGE

- Fully charge batteries. With electrolyte level up in all cells, store batteries in as cold a place as possible. If stored above 50°F (27°C), check state of charge every 8 to 10 weeks and charge as necessary to maintain 1.250 to 1.270 specific gravity. Use the chart below to determine freezing point of battery and maximum recommended storage temperature.

Specific Gravity	1.260		1.230		1.200		1.117		1.110	
	F°	C°	F°	C°	F°	C°	F°	C°	F°	C°
Freezing Point of Electrolyte	-70°	-57°	-39°	-38°	-16°	-26°	-2°	-19°	+17°	-8°

# SPECIFICATIONS

## GENERAL FEATURES

Columbia Car Exclusive Master Drive System with Selective Speeds Forward and Reverse.  
Maximum Speed on Level Ground Surface ..... 11 MPH

**Turning Radius** (measured from turning center to center of outside tire tread)  
4-Wheel ..... 11'  
3-Wheel ..... 10'8"

**Clearance Radius** (measured from turning center to outside edge of bumper)  
4-Wheel ..... 11'9"  
3-Wheel ..... 12'4"

## TIRES

Type ..... High Flotation  
Size ..... 8.50 x 8 std.  
Pressure ..... 18 psi (1.2 atm), front and rear

## BRAKES

Disk brake on drive shaft mechanically operated. Brake pedal incorporates ratchet lock for parking, with automatic release controlled by accelerator pedal.

## DIMENSIONS

Wheelbase		
Cruiser	66.5 in. (169 cm)	
Classic	60.5 in. (154 cm)	
Challenger	66.5 in. (169 cm)	
Overall Length		
Cruiser	101 in. (256 cm)	
Classic	91 in. (231 cm)	
Challenger	92 in. (234 cm)	
Overall Width		
Cruiser	46 in. (117 cm)	
Classic	45 in. (115 cm)	
Challenger	46 in. (117 cm)	
Overall Height		
Cruiser	47.5 in. (121 cm)	
Classic	46.5 in. (118 cm)	
Challenger	48 in. (122 cm)	
Ground Clearance		
Cruiser	4 in. (10 cm)	
Classic	4 in. (10 cm)	
Challenger	4 in. (10 cm)	
Weight		
	w/o batteries	
	with batteries	
Cruiser	670 lbs. (304 kg)	1018 lbs. (462 kg)
Classic	613 lbs. (278 kg)	961 lbs. (436 kg)
Challenger	574 lbs. (260 kg)	922 lbs. (418 kg)
Maximum Load Capacity		
Cruiser	750 lbs. (338 kg)	
Classic	750 lbs. (338 kg)	
Challenger	750 lbs. (338 kg)	

## TRACTION MOTOR

Type	Series wound, reversible
Rating	2 H.P. @ 2800 R.P.M., 36 volts

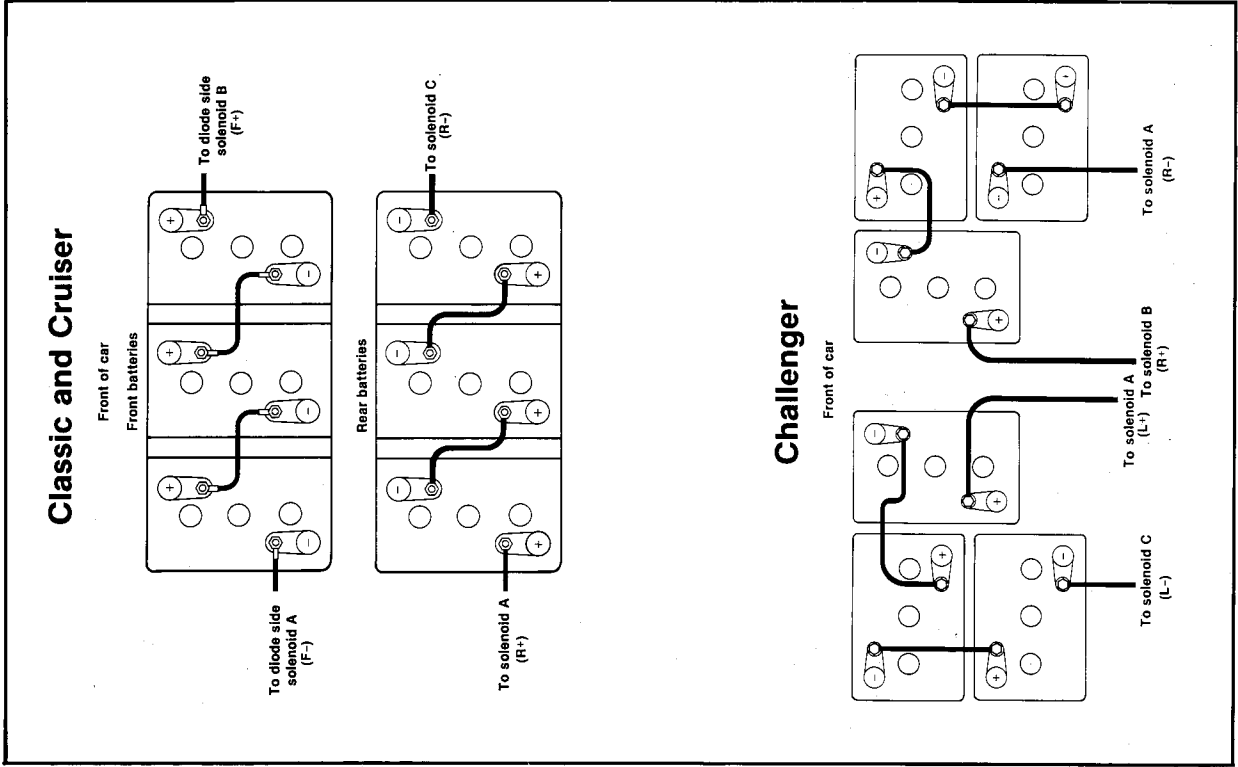
## DRIVE

Direct Drive Motor to Differential Shaft	
Drive Ratio	12.25

## BATTERIES

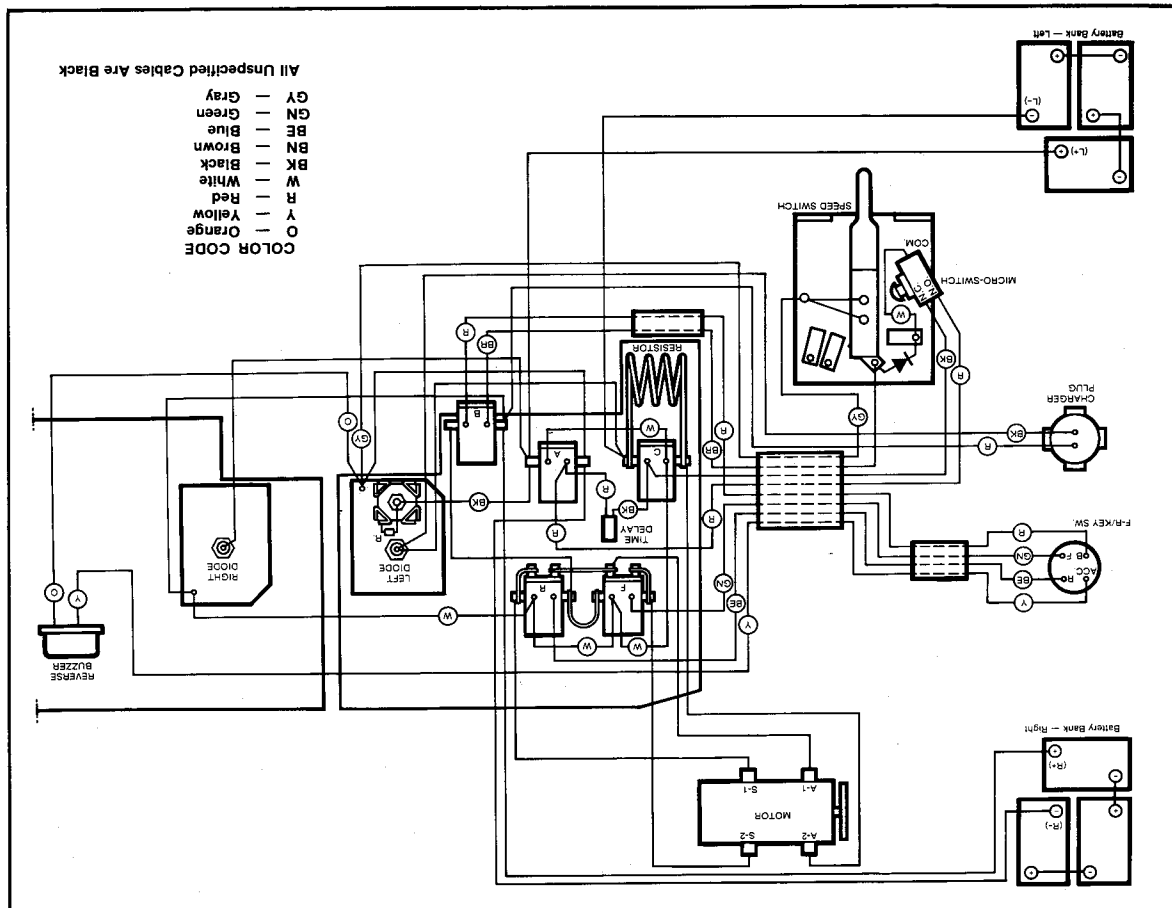
Type	6-volt electric vehical (EV) lead storage battery
Quantity	6 per car
Rating - standard duty	88 minutes (75 amp discharge at 80°F to 5.25 volts)
	optional 106 minutes (75 amp discharge at 80°F to 5.25 volts)
Charge Rate	Maximum; 25 amperes with automatic charger reduction to low rate (total for 6 batteries in series)

## BATTERY CONNECTIONS

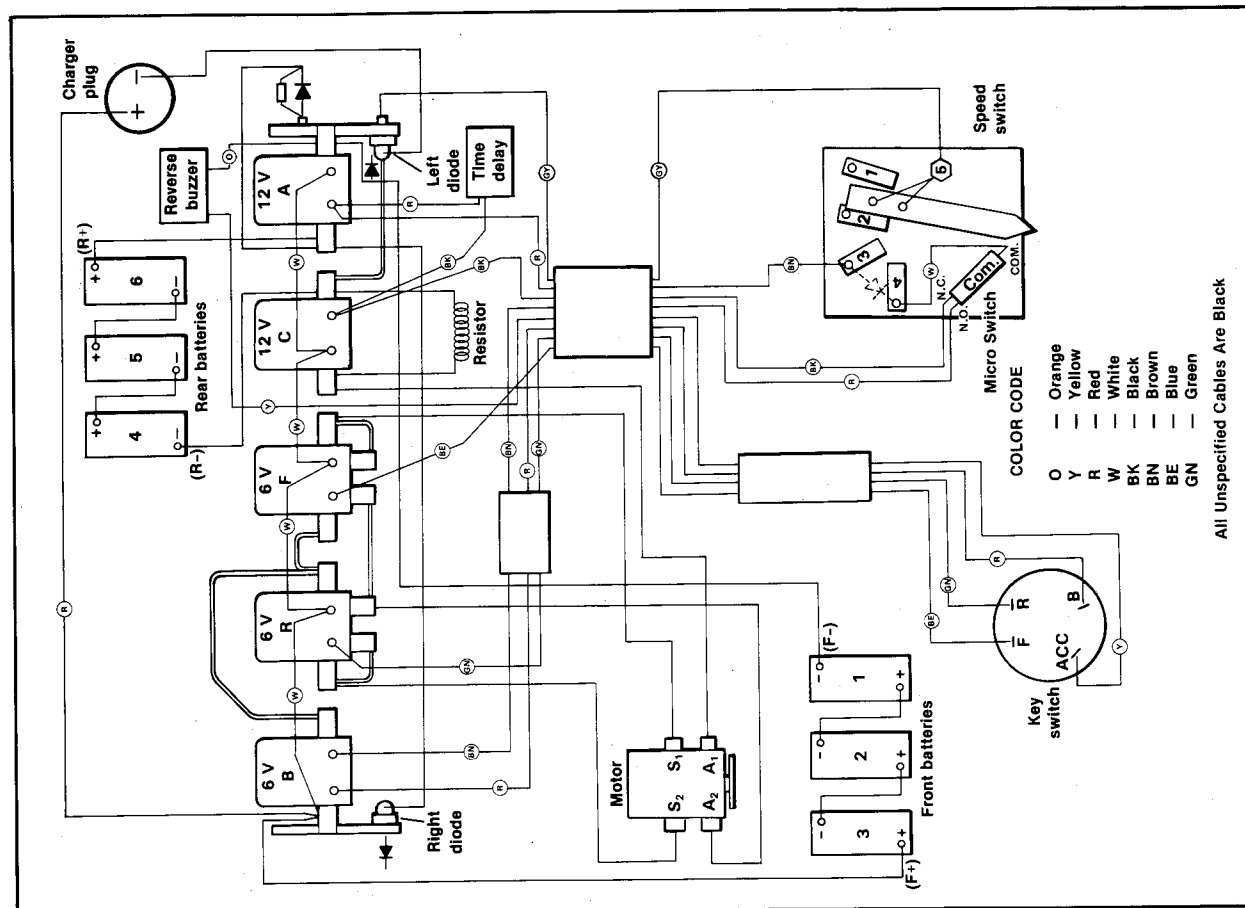


See your Columbia Car dealer for his full line of replacement parts, accessories, service aids and service tools.

# WIRING DIAGRAM CHALLENGER



# WIRING DIAGRAM CLASSIC AND CRUISER





# COLUMBIA



We warrant to the original consumer purchaser only that our 1984 model electric golf car will be free from defects in factory materials and workmanship under normal use and service for a period of twelve months (twenty-four months for Master Drive System) from the date of delivery or date of first use, whichever is earlier, as more fully explained below:

1. Columbia will pay for parts provided under this warranty and you must pay all other expenses incurred in obtaining warranty repairs, including transportation and labor charges, if any. If we believe factory inspection of an alleged defective part is required, the part must be returned to us, transportation charges prepaid by the purchaser, as prior condition to the allowance of any warranty claim.
2. If the vehicle is equipped with batteries installed at the factory as original equipment, the batteries are covered under a separate warranty included in your package and not covered by this warranty. Your Columbia Car Dealer will assist you in requesting an adjustment if this becomes necessary.
3. The Master Drive System, consisting of the solenoids, resistor, time delay, diodes and speed switch, is warranted for the first twenty-four months.
4. To qualify for warranty protection, you and the selling dealer must complete the Warranty Registration Form and return it to us within ten days after delivery. If this form is not on file, we will not be able to honor your warranty claims.
5. To obtain warranty service, you must return your golf car during the warranty period to the selling Columbia Dealer, to any authorized Columbia Dealer if you have moved a long distance or to any other qualified repair facility. Our dealer should be able to provide service during his normal business hours and within a reasonable time, depending upon his workload and the availability of any necessary parts. For commercial customers, such as country clubs and resorts, this warranty is as stated above except it is void unless the customer uses parts approved by Columbia Car and unless repairs and warranty service are performed at an authorized Columbia dealer. Further information regarding warranty service may be obtained from Columbia by writing our Customer Service Department, P.O. Box 1, One Golf Car Road, Deerfield, WI 53531.
6. Any changes in golf car design or equipment made during the course of the model season shall not apply to golf cars previously manufactured.
7. THIS WARRANTY WILL NOT APPLY TO DEFECTS WHICH ARISE OUT OF:
  - (a) Failure to operate or maintain as specified in the applicable Owner's Manual.
  - (b) Abuse, misuse or neglect, including operation at other than the specified design speed or if used for other than golf play.
  - (c) Alteration or repair outside of factory specifications.
  - (d) Maintenance or operation by use or attachment of accessories, or parts and lubricants not specified by us which adversely affect the golf car's stability, reliability or performance.

# 1984 ELECTRIC GOLF CAR LIMITED WARRANTY 12/24 MONTHS

## 8. THIS WARRANTY SHALL NOT APPLY TO:

- (a) Non-genuine parts and any damage caused by their use including damage caused by the use of batteries which do not meet Columbia specifications.
  - (b) Improperly installed repair parts.
  - (c) Normal maintenance shown in the Owner's Manual which the purchaser is expected to perform including, but not limited to, brake adjustment, battery maintenance (cleaning, maintaining proper fluid levels and battery charge), lubricant replacement in differential assemblies, etc.
  - (d) Fading or deterioration of seats, fiberglass, paint or chrome caused by ordinary wear and tear or exposure.
9. Our dealers are independently owned and operated, and may sell products other than Columbia. Therefore you should understand that WE ARE NOT, AND CANNOT, BE RESPONSIBLE FOR THE QUALITY, SUITABILITY OR SAFETY OF ANY NON-COLUMBIA PART, ACCESSORY OR DESIGN MODIFICATION, INCLUDING LABOR, WHICH MAY BE SOLD AND/OR INSTALLED BY OUR DEALERS OR ANY DAMAGE CAUSED THEREBY.
- THERE IS NO OTHER EXPRESS WARRANTY ON YOUR GOLF CAR. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS IS LIMITED TO THE TWELVE MONTH PERIOD OF THIS WARRANTY. TO THE FULLEST EXTENT ALLOWED BY LAW, COLUMBIA CAR CORPORATION AND ITS DEALERS SHALL NOT BE LIABLE FOR LOSS OF USE, INCONVENIENCE, LOST TIME COMMERCIAL LOSS OR ANY OTHER INCIDENTAL, CONSEQUENTIAL, OR OTHER DAMAGES.
10. (EXPORT GOLF CARS ONLY) In the case of golf cars sold outside the U.S.A. and Canada, defective parts must be returned to the selling dealer, transportation charges prepaid by the purchaser. Our dealer will then replace all parts which his inspection shall show to be defective under the warranty. We assume no liability for our dealers labor charges, if any, or any other expenses. For further information concerning export golf car service, please contact Columbia Car Corporation, P.O. Box 1, One Golf Car Road, Deerfield, Wisconsin, 53531 U.S.A. Attn: Customer Service Dept. (608) 764-5474.

Some states do not allow the exclusion or limitation of incidental, consequential or other damages, or limitations on how long an implied warranty lasts, so the above limitations and exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.