

John Deere Golf Technologies

Installation Manual

Generation 4

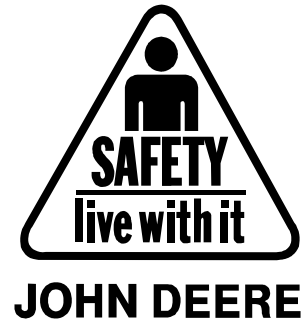
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Dec 04, 2000

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Live With Safety

Please before returning cart to customer, make sure cart is functioning properly, especially the safety systems. Install all safety guards and shields.



Overview

General System

SkyLinks is a golf management / information system. It provides valuable information to the golfer and the course manager through such technologies as satellite navigation and digital radio communications.

The main components of SkyLinks are the computer display units on each golf cart, a central computer server in the clubhouse, workstation computer(s), and a communications system to tie it all together.

Golf cart computers

The golf cart computer performs the following functions:

Vehicle tracking with GPS (Global Positioning System)

Data feed to/from the clubhouse

- Advertising images
- Text messages from the clubhouse
- Display tailored to the golfer to display:
 - Course map display
 - Accurate yardage information
 - Pro's tips

Parts List

Assembly Part Numbers

Part numbers are assigned by Phoenix International, and are subject to change without notice

Item	Part Number	Description
HEAD UNIT ASSEMBLY	JDGT-0001	Display Unit
POWER SUPPLY	JDGT-0002	Power Supply
BKT, PWR SUPPLY – CLUBCAR	800-0267	Assy with Power Supply
CLAMP, DISPLAY – CLUB CAR	800-0255	Assy with P/N 800-0267 and P/N 950-0093
CBL ASSY, CLUBCAR ELECTRIC	440-0600	Power Harness Assembly
CBL ASSY, CLUBCAR GAS	440-0660	Power Harness Assembly
JDGT HDW KIT	JDGT-0004	Bulk Item Hardware Kit
PHMS, PHIL, 10-32 X .750	812-0067	Screw to secure P/N 800-0255
PHMS, PHIL, 10-24 X 1.50	812-0068	Screw to secure P/N 800-0246
PHMS, PHIL, ¼-20 X .500	812-0075	Secures Head Unit
HHMS, CAP ¼-20 X 2.75"	816-0006	Secures Power Supply to bracket
LOCKWASHER, INT, 1/4?" ZNC	832-0019	Assy with P/N 812-0075
WSHR, FLAT #10 SS MS15795	838-0033	Assy with P/N 812-0068
SPCR, CLUBCAR ANTENNA BKT	840-0111	Assy with P/N 800-0246
CABLE TIE, 7.4" STANDARD	850-0005	Secures UHF and GPS Antenna Cables to Cart
CARTON 10 x 6 x 4	900-0053	Box to Hold Bulk Items
POLY BAG, ZIP-LOCK 4 X 6	901-0016	Packaging for shipping
BAG, 10 X 13 2 MIL	901-0022	Packaging for shipping
JDGT HDW KIT	JDGT-0013	Bulk Item Hardware Kit
PHMS, PHIL, 10-32 X .750	812-0067	Screw to secure P/N 800-0255
PHMS, PHIL, 10-24 X 1.75	812-0086	Screw to secure P/N 800-0246
PHMS, PHIL, ¼-20 X .500	812-0075	Secures Head Unit
PHMS, PHIL, 10-24 X .312	812-0087	Secures P/N 800-0290 and P/N 800-0292
HHMS, CAP ¼-20 X 2.75"	816-0006	Secures Power Supply to bracket
LOCKWASHER, INT, 1/4?" ZNC	832-0019	Assy with P/N 812-0075
WSHR, FLAT #10 SS MS15795	838-0033	Assy with P/N 812-0068
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JDGT BKT/ANT KIT-CLUB GAS	JDGT-0011	GEN 4 Club Car Gas Pre 2000 roof
CBL ASSY, CLUBCAR GAS	440-0660	Power Harness Assembly
BKT ASSY, CLUB CAR DSPLY	950-0093	Bracket for Display Unit
UHF ANT/BKT ASSY CLUBCAR	950-0094	UHF RADIO BRACKET ASSEMBLY PRE 2000
CLAMP, DISPLAY – CLUB CAR	800-0255	Assy with P/N 800-0267 and P/N 950-0093
CRTN, 22 5/16 X 18 3/16 X	900-0001	Packaging for shipping
PARTITION, 35 CELL	900-0006	Packaging for shipping
BUBBLE WRAP, ANT-STATIC	903-0001	
BKT ASSY, CLUB CAR DSPLY	950-0093	Bracket for Display Unit
Cover, Support – Club Car	800-0250	Cover Support Display
Support, Center –Club Car	800-0251	Center Support Display
BKT, MTG – Club Car	800-0852	Mounting Bracket Display
Plate, MTG – Color DSPLY	800-0853	Mounting Plate Display
PHMS, PHIL, 10-32 x .375	812-0066	
Hex Nut, 1/4 –20 Jam 18-8	822-0025	Secures P/N 845-0007
Bumper, 1" OD ¼ -20 x .50	845-0007	Attaches to Center Support
Grommet, Neoprene ID=5/16	845-0007	
Grommet, Neoprene ID=1/2	881-0009	
Antenna, GPS 8ft SMA MAG	496-0002	GPS Antenna
BKT, Antenna – Club Car	800-0246	Bracket for Antenna
Pad, Antenna MTG – PSC	852-0006	Adhesive for Antenna
BKT, Ant GPS Club Car 2000	800-0291	Bracket for GPS Antenna Post 2000
UHF ANT/BKT ASSY CLUB 2K	950-0106	UHF BRACKET ASSEMBLY POST 2000
Antenna, UHF Maxrad	496-0006	UHF Antenna
BKT, Ant UHF Club 2k	800-0290	Top Piece of Post 2000 UHF Antenna
PHMS, PHIL 10-24 X 1.75	812-0086	Secures P/N 800-0290 and P/N 800-0292
BKT, Ant-Bottom Club 2000	800-0292	Bottom Piece of Post 200 UHF antenna

Service Part Numbers

Service part numbers may be different from Bill of Material part numbers.

Part numbers are assigned by Phoenix International, and are subject to change without notice.

Item	Part Number	Description
ANTENNA, GPS 8ft SMA MAG	496-0002	GPS antenna
ANTENNA, UHF Maxrad	496-0006	UHF Antenna
CBL ASSY, CLUBCAR ELECTRIC	440-0600	Power Harness Cable
CBL ASSY, CLUBCAR GAS	440-0660	Power Harness Cable
DISPLAY UNIT	JDT-0001	Display
FUSE 3A, AUTO BLADE VI0	861-0054	3-amp fuse
GPS ANT/BKT ASSY CLUB CAR	800-0291	GPS bracket for Club Car Post 2000
HDWE PKG, CLUB CAR- COLOR	920-0017	Head Unit Bracket Assembly
PAD, ANTENNA MTG – PSC	852-0006	Circular adhesive for GPS Ant
POWER SUPPLY	JDGT-0002	Wedge Box
UHF ANT/BKT ASSY CLUBCAR	496-006	UHF bracket for Club Car Post 2000

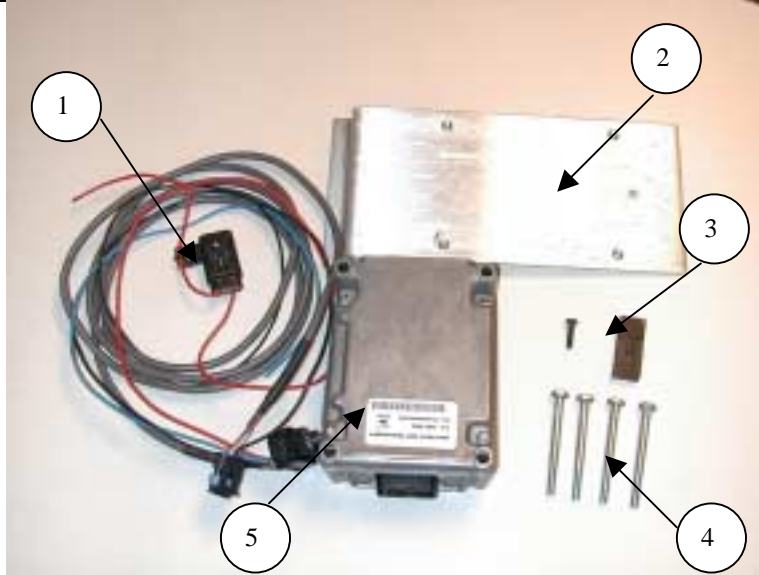
Parts Included in Bill of Material

There are different parts numbers for the Power Harness, GPS Antenna Bracket, and UHF Antenna Bracket based on the specific cart model and year.

Club Car Sub-Assemblies

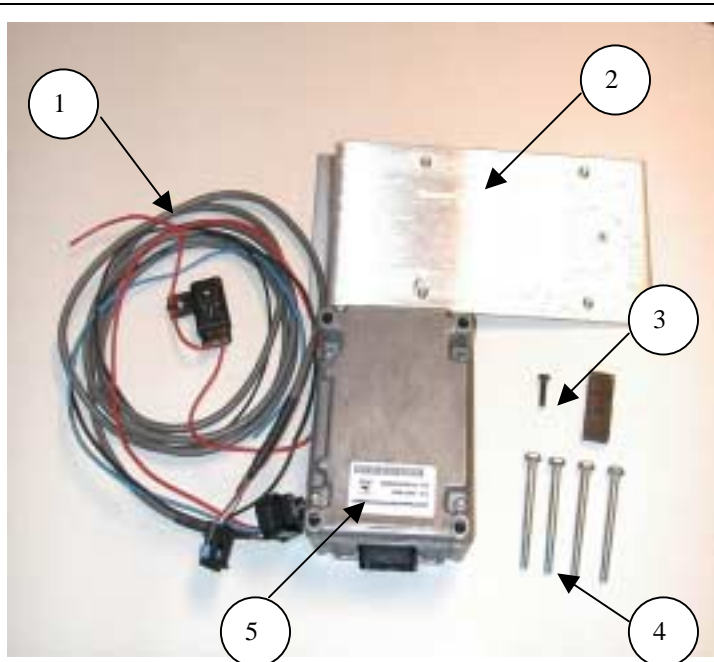
CBL ASSY, CLUBCAR ELECTRIC P/N 440-0600 AND POWER SUPPLY

1. Power Harness Assembly (P/N 440-0660)
2. Power Supply Bracket (P/N 800-0267)
3. Clamp and screw (P/N 800-0255 and P/N 812-0067)
4. Bolt (P/N 816-0006)
5. Power Supply (P/N JDGT-0002)



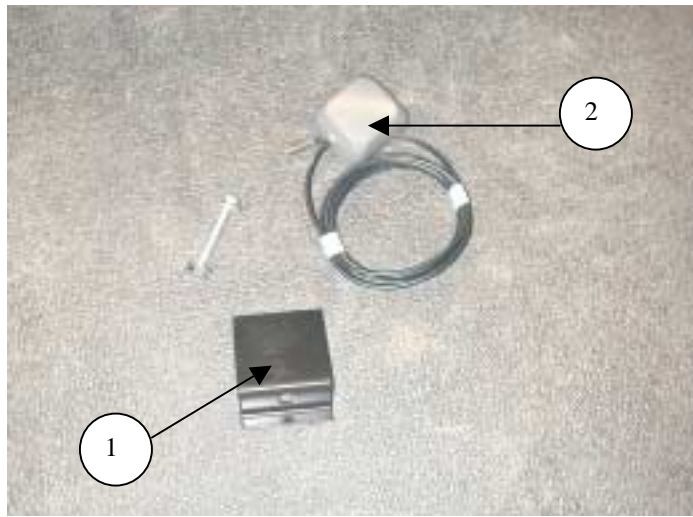
CBL ASSY, CLUBCAR GAS P/N 440-0660 AND POWER SUPPLY

1. Power Harness Assembly (P/N 440-0660)
2. Power Supply Bracket (P/N 800-0267)
3. Clamp and screw (P/N 800-0255 and P/N 812-0067)
4. Bolt (P/N 816-0006)
5. Power Supply (P/N JDGT-0002)



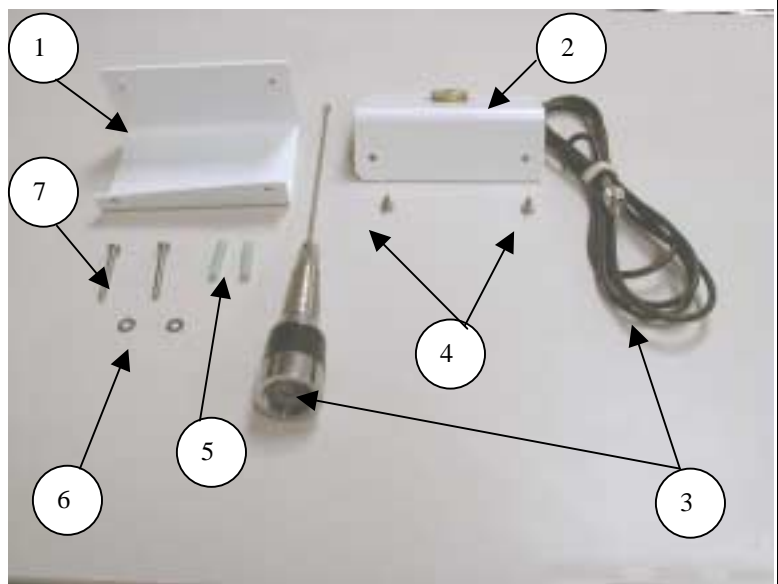
GPS ANT/BKT ASSY CLUBCAR P/N 950-0095 (Post 2000)

1. GPS Bracket
(P/N 800-0291)
2. GPS Antenna
(P/N 496-0002)



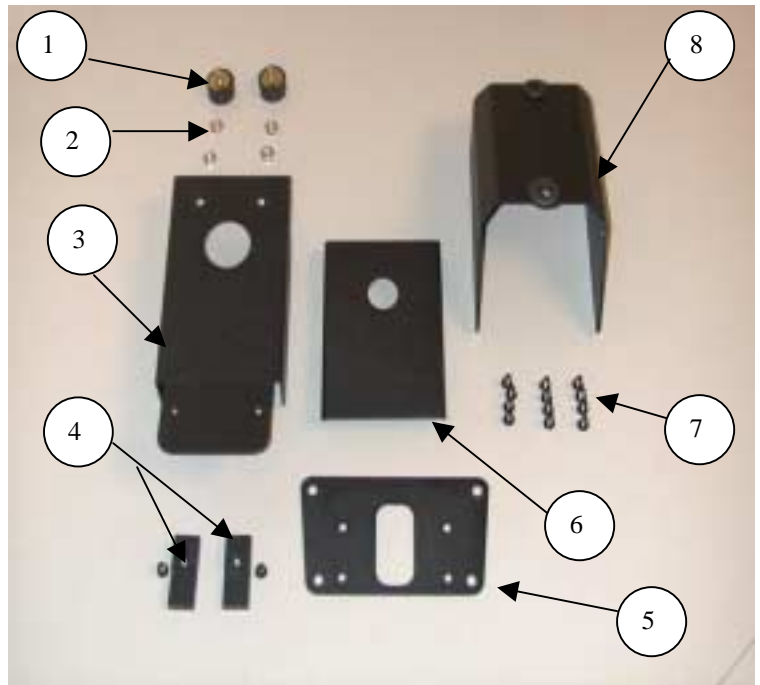
UHF ANT/BKT ASSY CLUB CAR P/N 950-0094 (Post 2000)

1. Antenna bracket bottom
(P/N 800-0292)
2. Antenna bracket top
(P/N 800-0290)
3. Antenna
(P/N 496-0006)
4. Screws to attach brackets
(P/N 812-0086)
5. Sheathing
(P/N 840-0111)
6. Washer
(P/N 838-0033)
7. Mounting screws
(P/N 812-0068)



HDWE PKG, CLUB CAR- COLOR P/N 950-0093

- 1. Bumper (P/N 845-0007)
- 2. Hex Nut (P/N 822-0025)
- 3. Center Support (P/N 800-0251)
- 4. Clamp (P/N 800-0255)
- 5. Display Unit Plate (P/N 800-0853)
- 6. Main Bracket (P/N 800-0852)
- 7. Screws (P/N 812-0066)
- 8. Support Cover (P/N 800-0251)



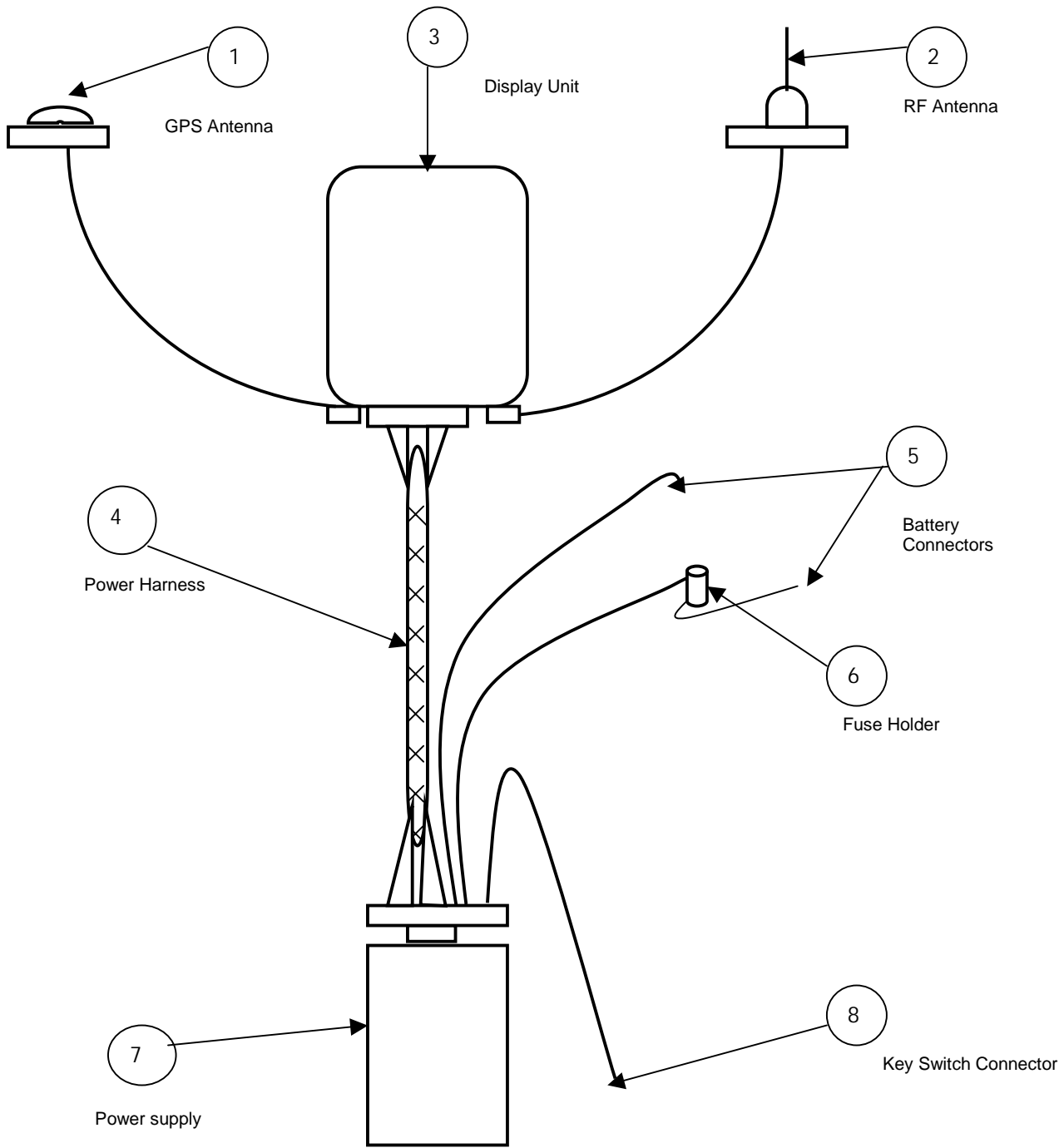
Tools and Equipment

Not Supplied With Kit

Club Car Tools and Equipment **Required-Under Review**

- Crescent Wrench
- Electric Screwdriver/Drill
- Phillips Head Bit
- Phillips Screwdriver
- Socket Adapter
- Wire Cutters
- ½ -9/16" Socket
- 7/16" Socket
- 7/16" Wrench
- ½" Nut driver
- 3/8" Nut driver
- 5/16" Nut driver

Basic System Layout



- 1-GPS Antenna
- 2-RF Antenna
- 3-Display Unit

- 4-Power Harness
- 5-Battery Connectors
- 6-Fuse Holder

- 7-Power Supply
- 8-Key Switch connector

Basic Components:

1. Antennas
2. Display Unit
3. Power Supply
4. Power Harness

Before Installation review manual. To prevent damage to components and cart.

Installation Instructions

Overview of Club Car Post 2000 UHF Antenna Bracket Installation

FCC Antenna Radiation Caution to Installers

Use of any antenna other than the one provided with this kit may expose the user to radio frequency (RF) emission levels outside the FCC safety guidelines.

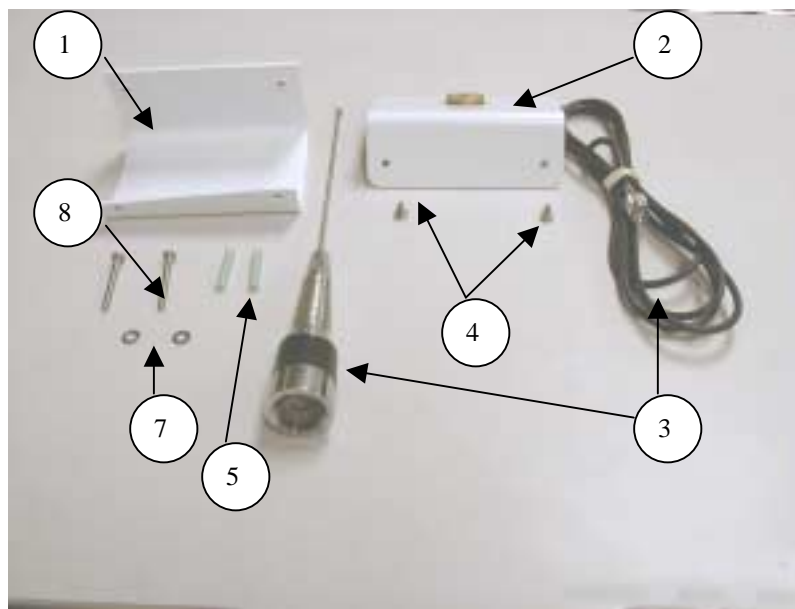
IMPORTANT NOTE: To comply with FCC RF exposure requirements, the following antenna installation and device-operating configuration must be followed to ensure a separation distance of 20 cm between the antenna and the operators of the golf cart

- Left (drivers side) and Right side of cart will be identified as someone sitting forward in cart.
- Before doing any work on golf cart, make sure that the key is in the off position.
- Ensure the parking brake is set.
- Remove windshields if installed before beginning as per Cart Manufacture User's Manual.
- The UHF antenna cable is not attached to the Display Unit during this phase of the installation. Leave cable assemble available for easy access for latter in the installation.

Specific UHF Antenna Bracket Installation instructions per cart type (ex. Club Car, EZ-GO, Yamaha), and model.

Club Car Post 2000 UHF Antenna Bracket Installation Parts (P/N 950-0106)

1. Antenna Bracket Bottom (P/N 800-0292)
2. Antenna Bracket Top (P/N 800-0290)
3. Antenna (P/N 496-0006)
4. Securing bracket screws (P/N 812-0086)
5. Spacer (P/N 840-0111)
6. Phillips Screws (2) (P/N 812-0086)
7. Flat Washer (2) (P/N 838-0033)



Club Car Post 2000 Completed UHF Bracket Installation



Club Car UHF Post 2000 Bracket Installation

1. Remove right side 7/16 bolts securing roof

Note: save 7/16 bolts and nuts for de-installation.



2. Attach screw, washer and plastic sheathing to bracket, and secure

Important:
UHF bracket
needs to be isolated from
cart ground.

Note: Use Part Numbers:
840-0111 spacer
838-0033 washer
812-0086 screw
800-0292 bottom half of
bracket



3. Attach top half of antenna bracket with screws and lock tight.

Note: Use Part Numbers:
800-0290 top half of bracket
812-0086 screws



4. Attach Antenna cable to bracket.

Caution

The installer(s) must follow the antenna installation procedure set fourth in this manual to insure that while the device is in operation, a separation of at least 20 cm is maintained between antenna and the user. These instructions must be followed in order to meet the FCC RF exposure guidelines. These requirements can only be met if the antenna is installed as described in the installation procedure steps and depicted in the pictures of the antenna location and mounting bracket



5. Attach antenna whip to cable base.

Caution

The installer(s) must follow the antenna installation procedure set fourth in this manual to insure that while the device is in operation, a separation of at least 20 cm is maintained between antenna and the user. These instructions must be followed in order to meet the FCC RF exposure guidelines. These requirements can only be met if the antenna is installed as described in the installation procedure steps and depicted in the pictures of the antenna location and mounting bracket



Note: Use Part Number: 496-0006 antenna assy.

6. Route UHF antenna cable down roof support. Placing the first tie strap at the top bend of support, and another every 6-8 inches.

Important: Do not pull UHF cable tight at the roof location. Allow a gentle bend to cart frame.

○ = Zip tie location



6. This completes the UHF bracket and UHF cable installation.

Note: Leave UHF cable connector end unattached. It will be connected later in the installation.

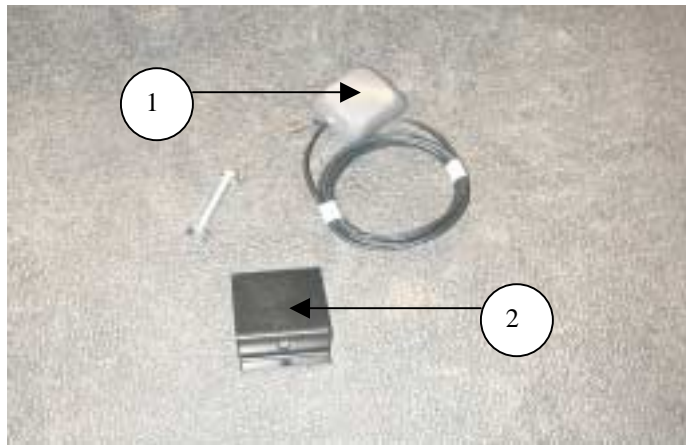
Overview of Club Car Post 2000 GPS Antenna Bracket Installation

- Left (drivers side) and Right side of cart will be identified as someone sitting forward in cart.
- Before doing any work to the golf cart, make sure the key is in the off position.
- Ensure the parking brake is set.
- Remove windshields if installed before beginning installation as per Cart Manufacture User's Manual.
- The GPS antenna cable is not attached to the Display Unit during this phase of the installation. Leave cable assemble available for easy access for latter in the installation.

Specific GPS Antenna Bracket Installation instructions per cart type ex. (Club Car, EZ-GO, Yamaha) and Model type.

Club Car Post 2000 GPS Antenna Bracket Installation Parts

1. GPS Antenna
(P/N 800-0291)
2. GPS Bracket
(P/N 496-0002)



Club Car Completed Post 2000 GPS Bracket Installation



Club Car Post 2000 GPS Bracket Installation

1. Remove front 7/16 bolt with locking nut on left side.



2. Mount GPS antenna bracket with 7/16 bolt that was removed in step 1, and reattach.

Note: Use Part Number: 496-0002 GPS Bracket



3. Mount GPS antenna on bracket. Antenna attaches magnetically.

Note: Use Part Number: 800-0291 GPS Antenna



3. Route GPS antenna cable down roof support. Placing the first tie strap at the top bend of support, and another every 6-8 inches.

Important: Do not pull GPS cable tight at the roof location. Allow a gentle bend to cart frame.

○ = Zip tie location

4. This completes the GPS bracket and GPS cable installation.

Note: Leave GPS cable connector end unattached. It will be connected latter in the installation.

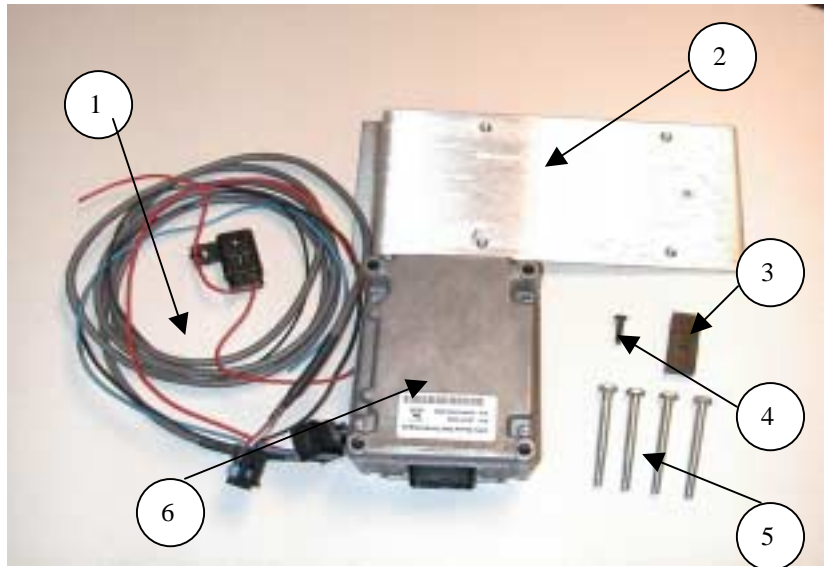


Overview of Club Car Post 2000 Power Harness Installation

- Make sure key switch is in the off position.
- Use caution when working around the batteries. Battery acid may exist around the terminal area.
- Verify the positive lead and ground of cart.
- When routing the Power Harness cable make sure the cable does not interfere with cart operation.
- The cable should be isolated of working parts of the cart.
- Two installers are required to remove seat to avoid back injuries.

Parts Required for Assembly of Power Supply Bracket and Mounting Power Supply

1. Power Harness
Electric (P/N 440-0600)
Gas (P/N 440-0660)
2. Power Supply Bracket
(P/N 800-0267)
3. Clamp
(P/N 800-0255)
4. Phillip Head Screw
(P/N 812-0067)
5. Bolt (4)
(P/N 816-0006)
6. Power Supply
(P/N JDGT-0002)



Club Car Power Harness Installation Parts



Assembly of Power Supply Bracket and Mounting Power Supply

1. Insert screw into hole on flat side of Power Supply Bracket

2. Start screw into clamp

Note: Use Part Numbers:
P/N 800-0255 clamp
P/N 812-0067 screw

Note: Notch of clamp should be to the inside towards power supply bracket.

3. Mount Power Supply onto bracket using four bolts.

Note: Power Supply connector should be facing towards beveled end of power supply bracket.

Note: Use Part Numbers:
P/N 816-0006 bolts
P/N JDGT-0002 Power Supply
P/N 440-0600 electrical
P/N 440-0660 gas
P/N 800-0267 bracket



Club Car Completed Power Harness Installation



Club Car Power Harness Installation

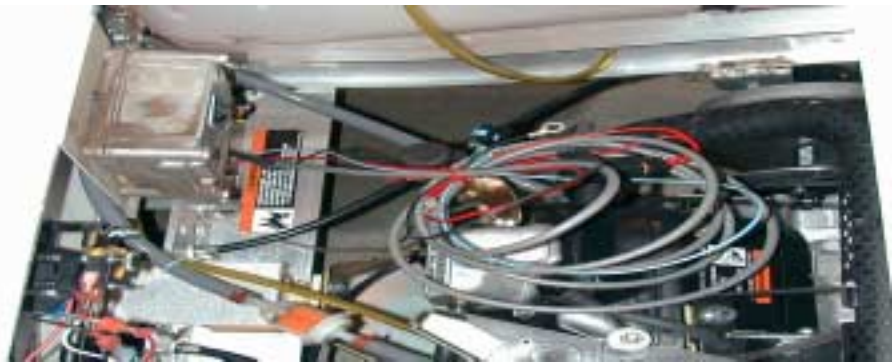
Note: Two Persons Should be used to Remove Seat.

1. Remove Seat
2. Mount Power Supply Bracket to cart. Location is left side
3. Tighten screw for Wedge
4. Remove Dash



Note: Use Steps 5 through 18

5. Remove screw caps on the side of dashboard, and save
6. Loosen screws securing dashboard
7. Pop off top of dashboard by running screwdriver along the top of dash and below frame of cart
8. Bend top right corner of dash inward to get key switch assembly out of dash



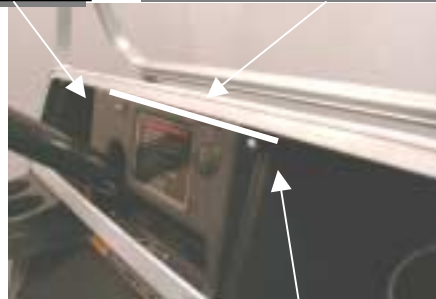
Note: DO NOT LET KEY SWITCH COME IN CONTACT WITH FRAME OF CART. IT WILL BLOW THE FUSE TO THE CART.

9. Run screwdriver along bottom side of dashboard to finish removing
10. Clip a 1/2" x 1/2" notch in the lower right corner of the dashboard.

Note: This is to allow enough clearance for the power cable to be ran into the bracket and attach to the head unit.

A. Remove cap
B. Loosen screw

E. Insert screwdriver here to remove dash.
F. Run screwdriver along black line



C. Remove cap
D. Loosen screw

11. Route Power cable along frame of cart. Secure with tie straps. In predrilled holes.



12. Pull about 1' 6" of cable out to be ran for the Display Unit.

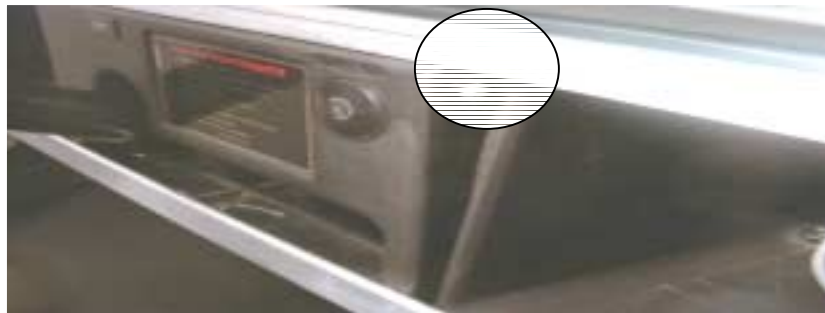
Installation Tip:
Run power cable to corner of compartment.

13. Insert bottom of dashboard back into place



Note: BE CAREFUL NOT TO ALLOW THE KEYSWITCH TO COME IN CONTACT WITH THE CART FRAME.

14. Bend right corner inward to allow key switch room to be inserted
15. Place left corner in place
16. Push top part of dash into place
17. Tighten screws
18. Replace caps
19. Attach Black wire to cart ground and secure with 5/16" lock washer 5/16" nut.
20. Route Red and Blue wire. Securing with tie straps.



Bend corner inward to get key switch past frame



Note: The cable should be isolated of working parts of the cart.

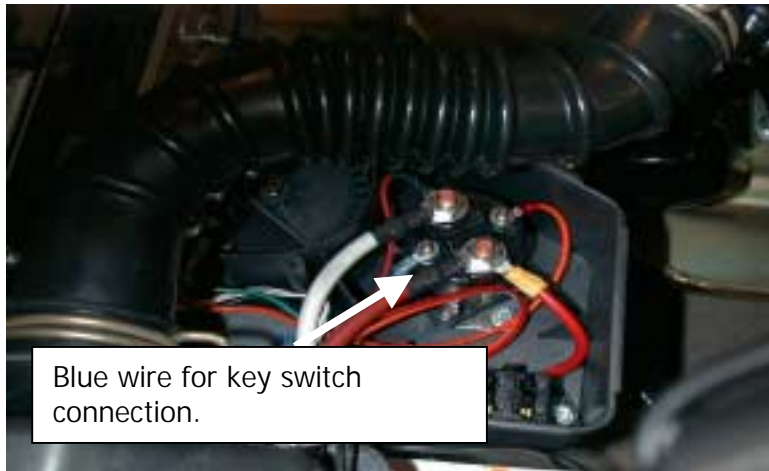
21. Remove Electrical Component Box Cover with 3/8" nut driver.



22. Remove Nut securing cart's blue wire

23. Install blue wire to electrical system for key switch.

24. Reinstall nut securing both blue key switch wires.



25. Remove Nut securing red battery lead on solenoid with 1/2" nut driver.

26. Attach red wire to solenoid post.

27. Reinstall nut securing red wire and red battery lead with nut.

28. Tighten with 1/2" nut driver.



29. Secure fuse holder to cart with tie strap.

Note: Make Sure Fuse Holder is in a Vertical Position with Leads Facing Toward the Ground, and the Fuse Holder is Accessible

30. Replace the Seat



Overview of Club Car Post 2000 Display Unit Bracket Installation

- Left (drivers side) and Right side of cart will be identified as someone sitting forward in cart.
- Make sure key switch is in the off position.
- Ensure the parking brake is set.
- When routing the Power Harness cable make sure the cable does not interfere with cart operation.
- The cable should be isolated of working parts of the cart.

Specific Display Unit Bracket Installation instructions per cart type ex. (Club Car, EZ-GO, Yamaha)

Club Car Display Unit Bracket Installation Parts

1. Display Unit Bracket



Club Car Completed Display Unit Bracket Installation



Club Car Display Unit Bracket Installation

1. Install Mounting Bracket on left side of cart.

Note: Place bracket as close to dash as possible.

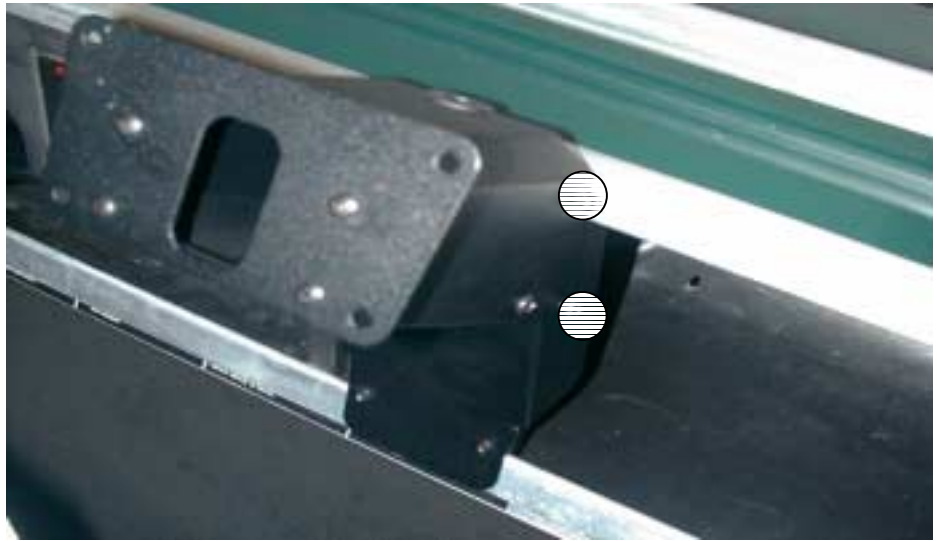


2. Push bracket up until ridge of bracket inserts under lip of cart. Also ensure the lower wedge pieces are positioned correctly.

Note: Wedge pieces should be aligned so the notch sits properly to cart edge.



3. Install centerpiece to bracket. Secure with four screws.



4. Run Power Harness cable behind mounting bracket and into hole in center piece of display bracket.



5. Route GPS and UHF cables through the center hole of center support.



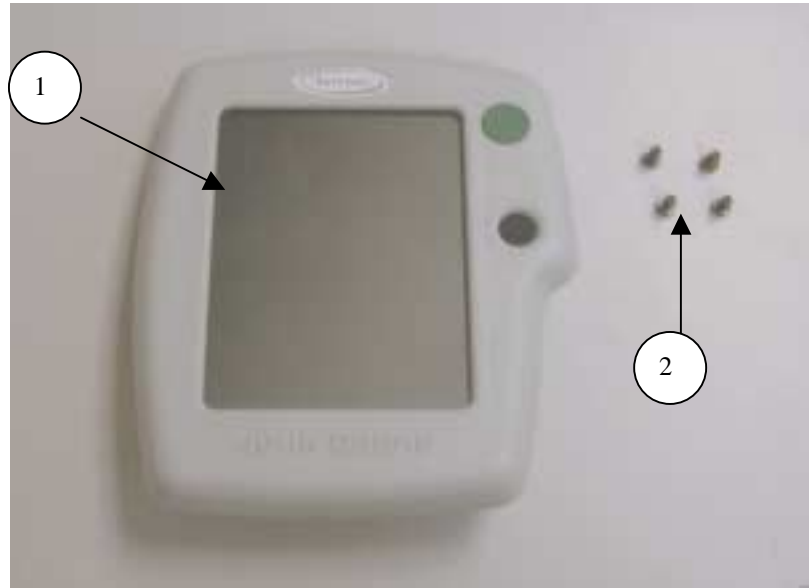
Overview of Generic Display Unit Installation

- Left (drivers side)and Right side of cart will be identified as someone sitting forward in cart.
- Make sure key switch is in the off position.
- Ensure the parking brake is set.
- When routing the Power Harness cable make sure the cable does not interfere with cart operation.
- The cable should be isolated of working parts of the cart.
- Use caution when installing the UHF and GPS connectors to the Display Unit.

Specific Display Unit Bracket Installation instructions per cart type ex. (Club Car, EZ-GO, Yamaha)

Club Car Display Unit Installation Parts

1. Display Unit
P/N JDGT-0001
2. Screws (4)
P/N 812-0075



Club Car Display Unit Installation



Club Car Display Unit Installation

1. Connect Power Harness connector to Display Unit



2. Attach UHF Connector to Display Unit



3. Attach GPS Connector to Display Unit



4. Secure Display Unit to Display Bracket using hex head screws.



Trouble Shooting

