



# Troubleshooting Guide

## 9760 Series

## 9762 Series



*Satellite Solutions for Mobile Markets*

11200 Hampshire Avenue South, Bloomington, MN 55438-2453  
Phone: (800) 982-9920 Fax: (952) 922-8424

[www.kingcontrols.com](http://www.kingcontrols.com)

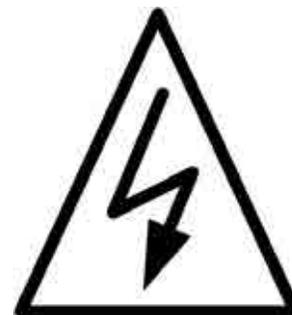


**IMPORTANT!** Before performing any warranty work, you must call King Controls for a Service Order Number.

Units are either single or dual rotary joint units. *Single rotary joint units have 1 coaxial connection on the back of the dome unit, and dual rotary joint units have 2 coaxial connections on the back of the dome unit.*

## ELECTRICAL HAZARD WARNING!

The coaxial cable that connects the dome unit to the tuner carries a 24 volt electrical current. Exercise extreme caution when handling this cable. Do not cut, break, or splice this line. Do not insert or connect any devices such as splitters or any other device for any reason. This line is not compatible with any other equipment. Damage will occur to any device other than the dome unit if connected to the antenna port on the tuner.



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Bell ExpressVu is an official trademark of Bell Canada.

DVB® is a trademark of the DVB Digital Video Broadcast Project (1991-1996)



**The King Controls Service Department is dedicated to providing its dealers and customers with the highest possible level of satisfaction and service.**

The satellite TV market is expanding and changing. The King Controls Service Department stays up to date with the latest information to assist you in keeping troubleshooting and repair time to a minimum.

When calling our service department, a King-Dome technician will issue a Customer ID Number (or Case Number) and then clearly define the proper course of action to follow. If any work is to be performed or parts replaced, a Service Order Number will also be issued. Additionally, the King-Dome technician will create a call log to aid in properly documenting the warranty claim.

**IMPORTANT!**

**For warranty reimbursement, you must call King Controls for a Service Order Number BEFORE performing any work: (800) 982-9920.**

**(Please have serial number and model of unit available when calling.)**

Every King-Dome Satellite System is covered by a **TWO YEAR PARTS AND ONE YEAR LABOR** limited warranty from the date of original purchase. (Upgrade kits are one year parts only.)

This warranty does not cover installation and external wiring, or refurbished units. This warranty also does not apply where:

- The product has been abused, misused, improperly installed or improperly maintained.
- Repairs have been made or attempted by others that are not certified by King Controls to do such repairs.
- Repairs are required because of normal wear and tear.
- Alterations have been made to the product.

### **PROCESSING A WARRANTY CLAIM**

Note: Only King Controls certified dealers are authorized to perform warranty evaluations and repairs.

- 1) Technician must first determine if the unit is under warranty by verifying original owner and date of original purchase. Dealer must provide one of the following when submitting a warranty claim:
  - copy of original purchase receipt, or
  - if unit was installed by an OEM, verification of in-service date
- 2) Technician must call King Controls to get a Service Order Number (800) 982-9920.  
**TECHNICIAN MUST NOT PROCEED WITHOUT A SERVICE ORDER NUMBER.**
  - A King-Dome technician will issue a Service Order Number and advise technician on how to proceed.
- 3) After repairs are completed, the following must be sent to King Controls:
  - Defective Part (Warranty Labor Claim will not be processed until part is returned.)
  - Warranty Consideration Form
  - Copy of Work Order
  - Proof of Purchase

### **KEY POINTS**

- 1) For units in service longer than one year, the customer is responsible for labor time.
- 2) Installation parts (coax, power and data cables, etc.) are not covered.
- 3) Replacement parts (including domes) are sent directly from King Controls. **DO NOT USE NEW PRODUCT FOR WARRANTY REPLACEMENT WITHOUT WRITTEN AUTHORIZATION FROM KING CONTROLS.**
- 4) Technician must call King Controls before performing any work for which warranty labor reimbursement will be submitted to King Controls. A King-Dome technician will issue a Service Order Number and specify the allotted time for the repair. If repairs will take longer than the allotted time, and the servicing dealer wishes to receive proper reimbursement, the technician must receive prior authorization to exceed the allotted time.
- 5) Warranty claims must include: proof of purchase, Warranty Consideration Form with Service Order Number, and copy of work order with labor time which matches that allotted by King Controls.
- 6) King Controls shall reimburse the servicing dealer for warranty work at their published labor rates.
- 7) Enclose paperwork with defective part. Clearly mark the Service Order Number on outside of box.

# SECTION 3 OPERATION

Note: This example is for the DTV 101 satellite in Region 2-North Central. The information on your controller will vary depending on the satellite and region you have chosen.

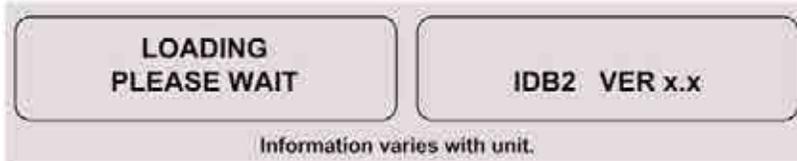
## BASIC OPERATION

1. Turn on TV and satellite receiver. "Searching for Satellite Signal" or similar should appear on TV.

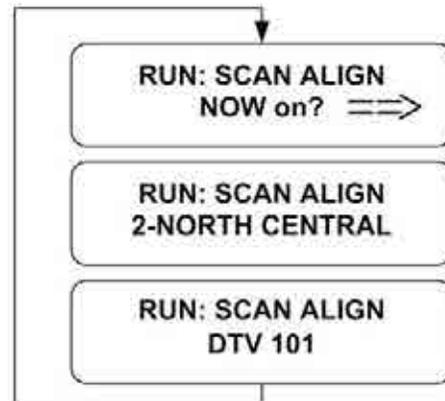
2. Press 

Unit powers up, performs a self-diagnostic and loads software.

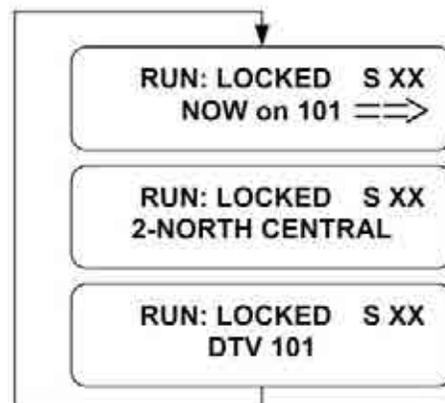
POWER UP  
PLEASE WAIT



Unit begins searching for the selected satellite.



Unit has locked onto the selected satellite.

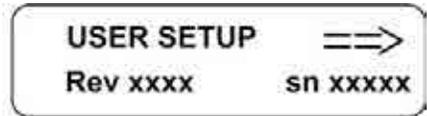


Note: The Trac-King must remain powered on to maintain a signal. If you are going to be stationary and wish to continue watching TV, **DO NOT TURN THE SYSTEM OFF.** Instead, press START/STOP to put the unit into Idle/Hold.

# SET REGION

Note: Setting the current region reduces satellite acquisition time.

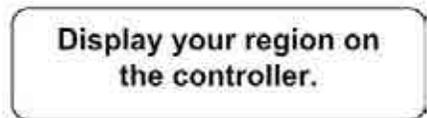
1. Press **MAIN** Unit goes into USER SETUP menu.



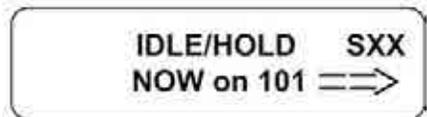
2. Press **→** Unit goes into SET REGION menu.



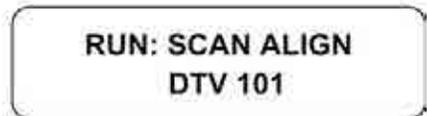
3. Press **+** or **-** Find your location on the map below and determine which region you are in. Use the plus and minus buttons to display your region on the controller.



4. Press **ENTER** Sets REGION into memory.

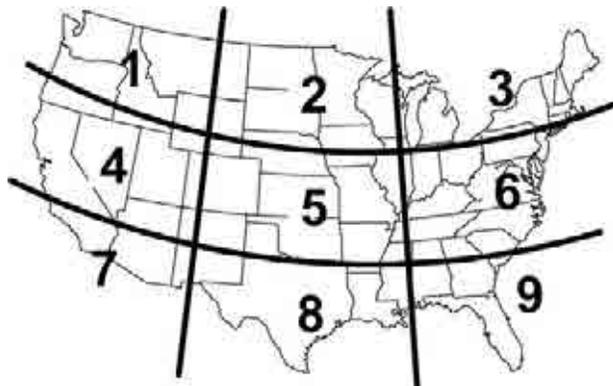


5. Press **ON** Unit searches based on new REGION.



## REGION OPTIONS:

- 1 NORTH WEST
- 2 NORTH CENTRAL
- 3 NORTH EAST
- 4 CENTRAL WEST
- 5 MIDDLE CENTRAL
- 6 CENTRAL EAST
- 7 SOUTH WEST
- 8 SOUTH CENTRAL
- 9 SOUTH EAST
- ALL REGIONS
- 0 RECALIBRATE



# SET SATELLITE SERVICE

## SATELLITE LIBRARY

DISH 61	Dish Network at 61
EXPVU 91	Bell ExpressVu at 91
DISH 129	Dish Network at 129
DISH 148	Dish Network at 148
EXPVU 82	Bell ExpressVu at 82
DISH 110/119	Dish Network at 110 and 119
DISH 1000	Dish Network HDTV at 110, 119, and 129
DISH 1000a	Dish Network HDTV at 61, 110, and 119
DTV 101	DIRECTV at 101
Sat 110	Dish Network at 110
Sat 119	Dish Network at 119
DTV 101/ 110 hd	DIRECTV HDTV at 101 and 110
DTV 101/ 119	DIRECTV HDTV at 101 and 119

Note: Not all satellite options may be available with all units.

The King Controls HDTV Converter Box (#9747 or #9747-AM) is required to receive HD programming from the DIRECTV satellite at 110° West.

1. Press  Unit goes into SET SATELLITE menu.



**SET SATELLITE**  
■■■■■■■■

2. Press  or  Use the plus and minus buttons to display your selected satellite on the controller.

**Display selected satellite on controller.**

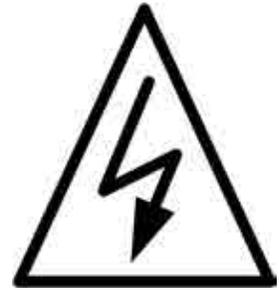
3. Press  Sets satellite in memory. Unit moves to new selected satellite.

**RUN: SWITCHING**

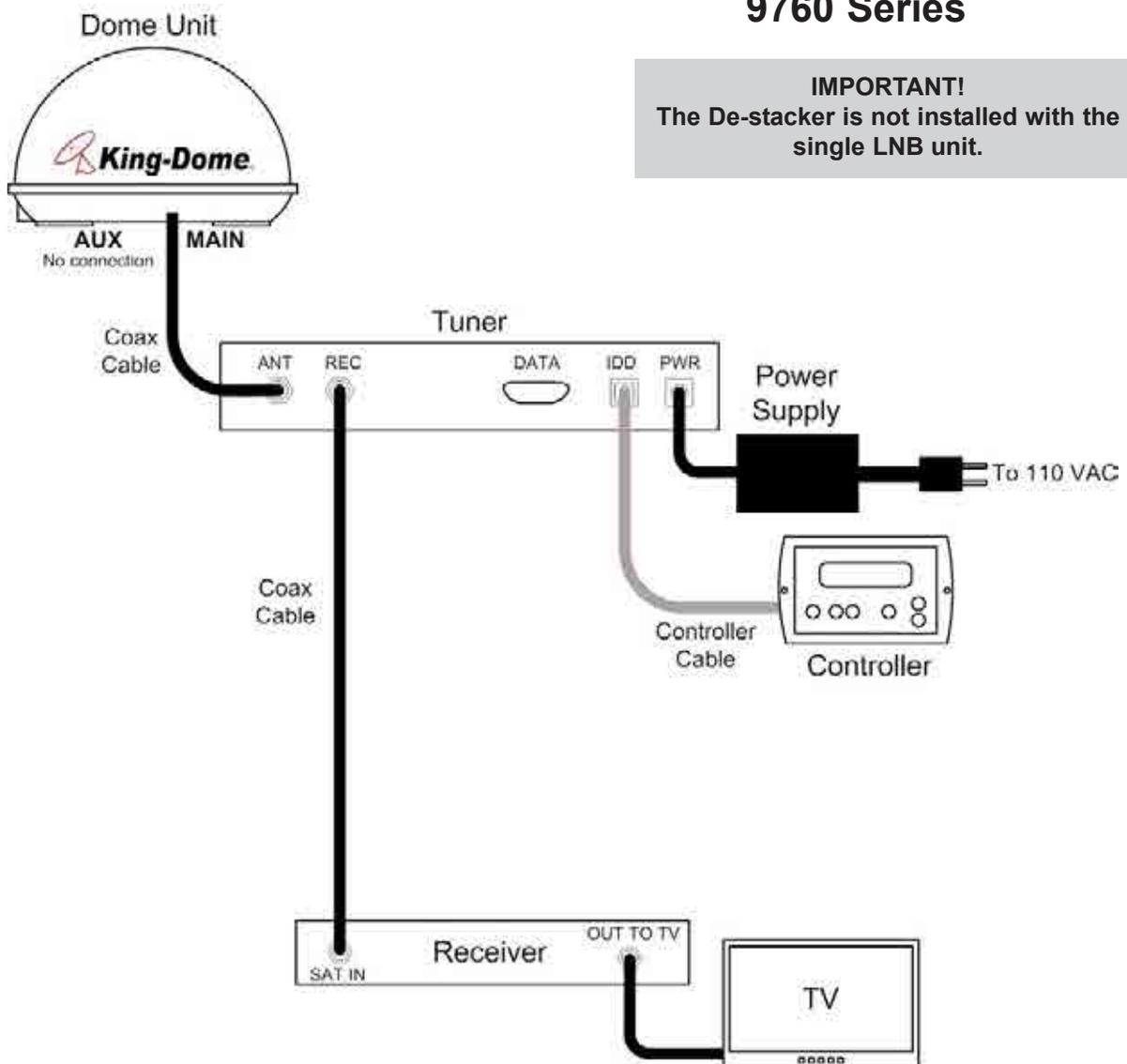
**RUN: LOCKED**  
Displays selected satellite

**ELECTRICAL HAZARD WARNING!**

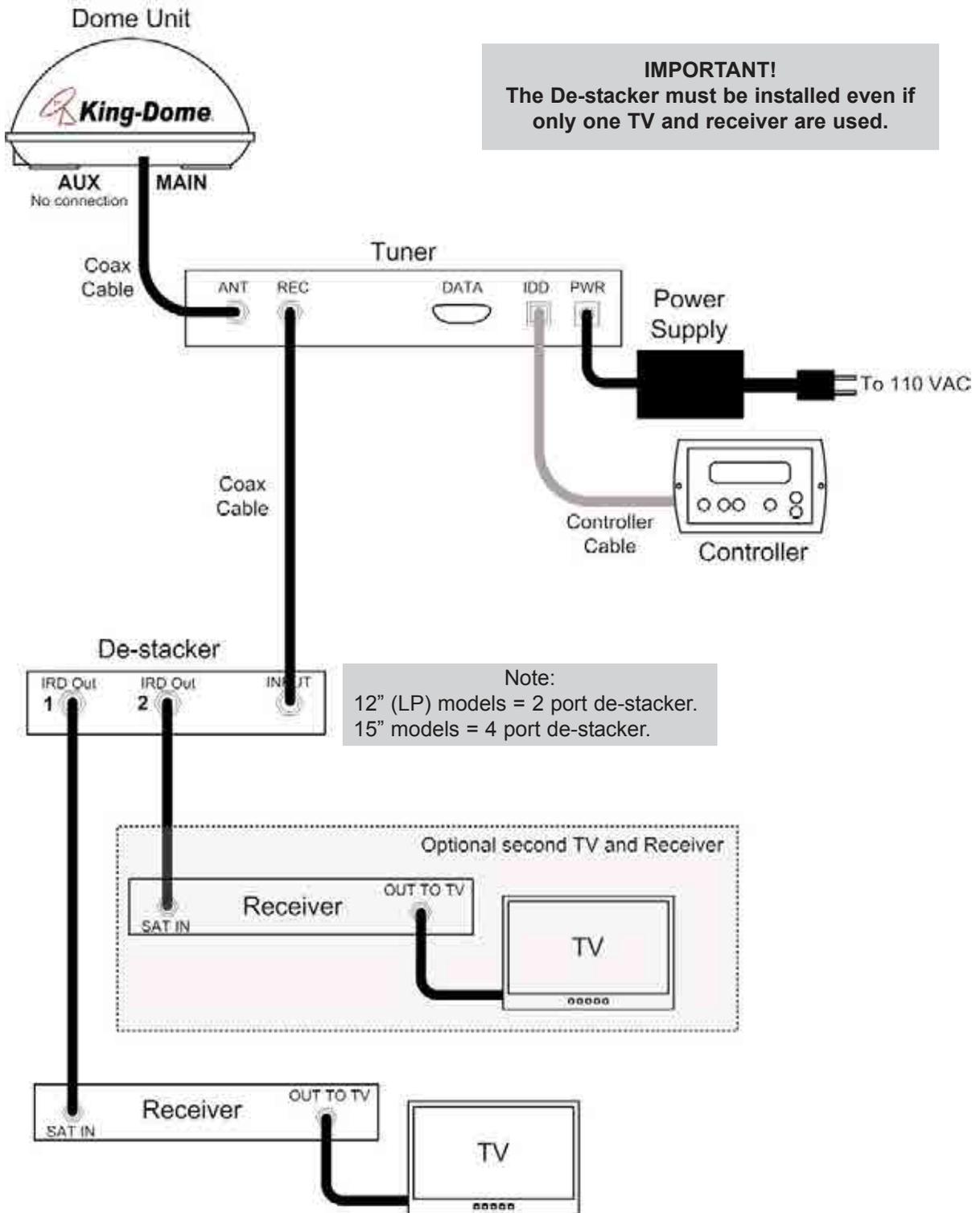
The coaxial cable that connects the dome unit to the tuner carries a 24 volt electrical current. Exercise extreme caution when handling this cable. Do not cut, break, or splice this line. Do not insert or connect any devices such as splitters or any other device for any reason. This line is not compatible with any other equipment. Damage will occur to any device other than the dome unit if connected to the antenna port on the tuner.

**SINGLE LNB UNIT  
9760 Series**

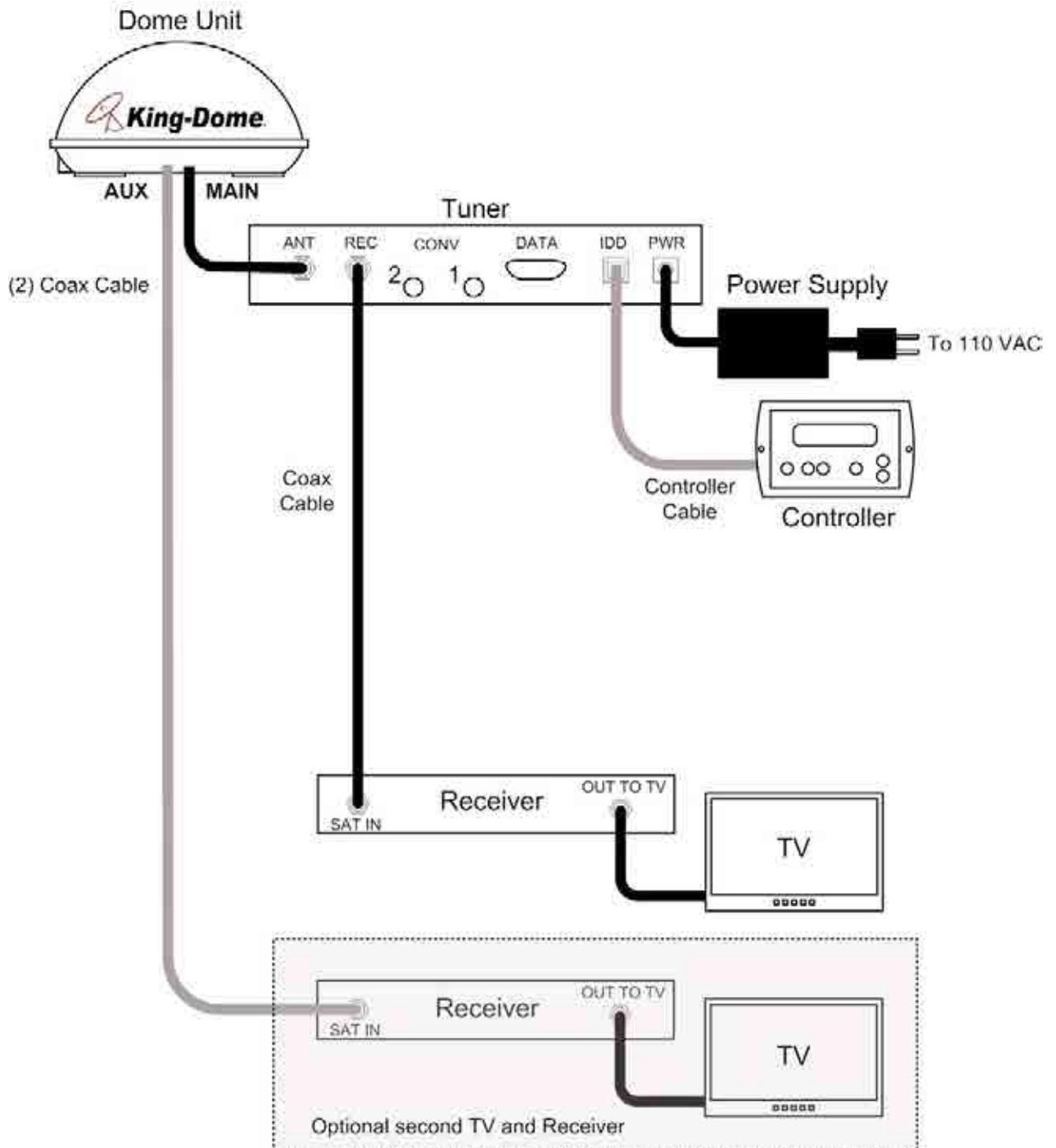
**IMPORTANT!**  
The De-stacker is not installed with the single LNB unit.



# DUAL LNB UNIT Single Rotary Joint 9762 Series



# DUAL LNB UNIT Dual Rotary Joint 9762 Series



## DIRECTV

Note: Unit must have software revision 5.22c or higher. See Section 9, Diagnostic Pages, to determine software revision of unit.

To receive programming from the DIRECTV 101 satellite only, your receiver must be set for round dish-1 satellite (do this through the receiver's satellite set-up menu screens).

To automatically switch between the 101 and 119 satellites for DIRECTV, choose the DTV 101/119 option (see **SET SATELLITE SERVICE**), and make sure your receiver is set for oval dish-2 satellites (do this through the receiver's satellite set-up menu screens).

For DIRECTV HD programming the Trac-King allows you to receive the specially formatted HD signals from DIRECTV's 110° satellite and automatically switch between satellites 101/110 and 101/119 when simply changing channels. **With a properly installed HD converter accessory #9747 or #9747-AM, the King-Dome will receive available HDTV programming from DIRECTV Ku band satellites at 101°, 110° and 119°. It will not receive channels broadcast from DIRECTV's Ka band satellites at 99° and 103°.** (See Section 6, DIRECTV HDTV.)

The automatic satellite switching feature can be active on 1 or more receivers depending on how the system is installed. The two options for automatic satellite switching are as follows:

### **Automatic Switching from any receiver**

To automatically switch satellites from any receiver location when the installation includes 2 or more satellite receivers, the #1810 multi-switch must be installed in-line (see pages 19 and 21). This allows any of the receivers to provide the switching command to the antenna when a channel from the alternate satellite is selected, provided that all other receivers are tuned to a channel on an odd transponder on the 101 satellite such as channel 202. (At the time of publication, channel 202 is broadcast on an odd transponder on satellite 101. This is subject to change. If in doubt whether channel 202 is still on an odd transponder, contact DIRECTV or call King Controls.)

### **Automatic switching for select receivers only**

To selectively enable or disable automatic satellite switching when using multiple receivers, one or more tone block accessories (#1832) may be required. Please contact King Controls for configuration options.

### **Manual Switching**

To disable automatic switching, manually select your desired satellite using the controller as outlined in **SET SATELLITE SERVICE**.



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# DISH 500 for DISH NETWORK

Note: Unit must have software revision 5.23a or higher. See Section 9, Diagnostic Pages, to determine software revision of unit.

The Trac-King will automatically switch between the 110 and 119 satellites for Dish Network by using the receiver's remote control, after the receiver has been properly configured.

**IMPORTANT!** In order for all receivers to work properly, each one must be configured separately while connected to the MAIN port on the Trac-King.

**King Controls recommends using a Dish Network model 311 receiver for automatic satellite switching.**

Note: The SW21 switch is a receiver software configuration that is loaded into the receiver after running a check switch test with the dish locked on and configured for Dish 500 switching mode.

This is a one time procedure and will not need to be repeated after successful installation, unless the check switch test is run again while connected to a home dish system.

1. Turn on TV, satellite receiver and the Trac-King.



2. Press  Unit goes into SET SATELLITE menu.

SET SATELLITE



3. Press  or  as needed to display:

SET SATELLITE

DISH 110/119

4. Press  Wait for dish to lock onto satellites, and controller to display:

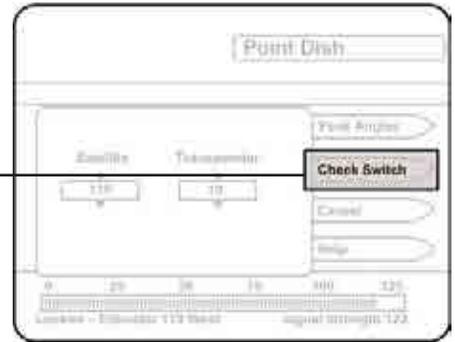
RUN: LOCKED S XX  
DISH 110/119 ==>

RUN: LOCKED S XX  
CURRENT ZONE

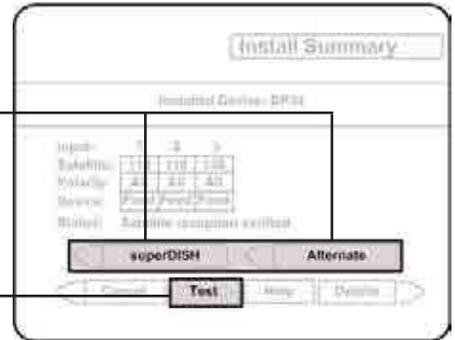
RUN: LOCKED S XX  
DISH 110/119

5. On receiver remote, press **MENU 6 1 1**.

6. Highlight **Check Switch** and press **Select**.



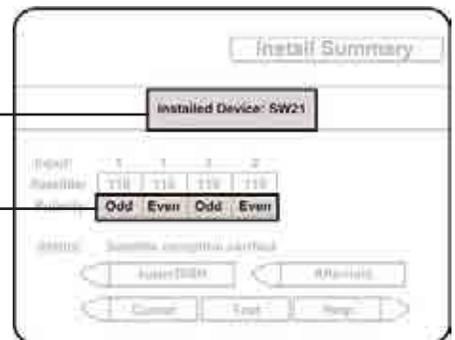
7. Make sure **Superdish** and **Alternate** boxes are **NOT** checked.



8. Highlight **Test** and press **Select**.

The unit will perform a check switch test, and the dish will periodically move back and forth. (This process will take several minutes.)

**MUST SHOW**  
"SW21"  
**NO "X"s**



9. When test is complete, SW21 appears as the installed device, and there must be no "X"s in the indicated columns.

Screen graphics may vary.

Note: Loading the SW21 may require several attempts due to geographical area and available satellite signal strength. If desired results are not obtained, verify there are no line of sight obstructions to the satellites. (Do this by choosing each satellite individually and verifying the Trac-King locks onto each one.) Choose DISH 500 again and re-run the test. If test fails call King Controls at (800) 982-9920.

## OPERATION

Note: For better performance when using the automatic satellite switching feature, change channels by selecting your program from the channel guide rather than channel surfing.

1. Simply choose your desired channel using the receiver's remote control. The Trac-King will automatically switch to the appropriate satellite. (*Master receiver only.*)

Note on Error Messages: It is common to receive a temporary error message displayed on the TV when the antenna is switching between satellites or the signal has been blocked. If an error message appears for an extended period, selecting CANCEL may help clear the message more quickly.

# DISH 1000 for Dish Network HDTV

Note: Unit must have software revision 5.23b or higher. See Section 9, Diagnostic Pages, to determine software revision of unit.

The Trac-King offers a 3-satellite switching feature that allows easy access to all available programming, including HDTV channels. The antenna can be configured to automatically switch between satellites 110, 119, and 129 or alternatively between satellites 61, 110, and 119. The appropriate configuration will depend on your geographic location.

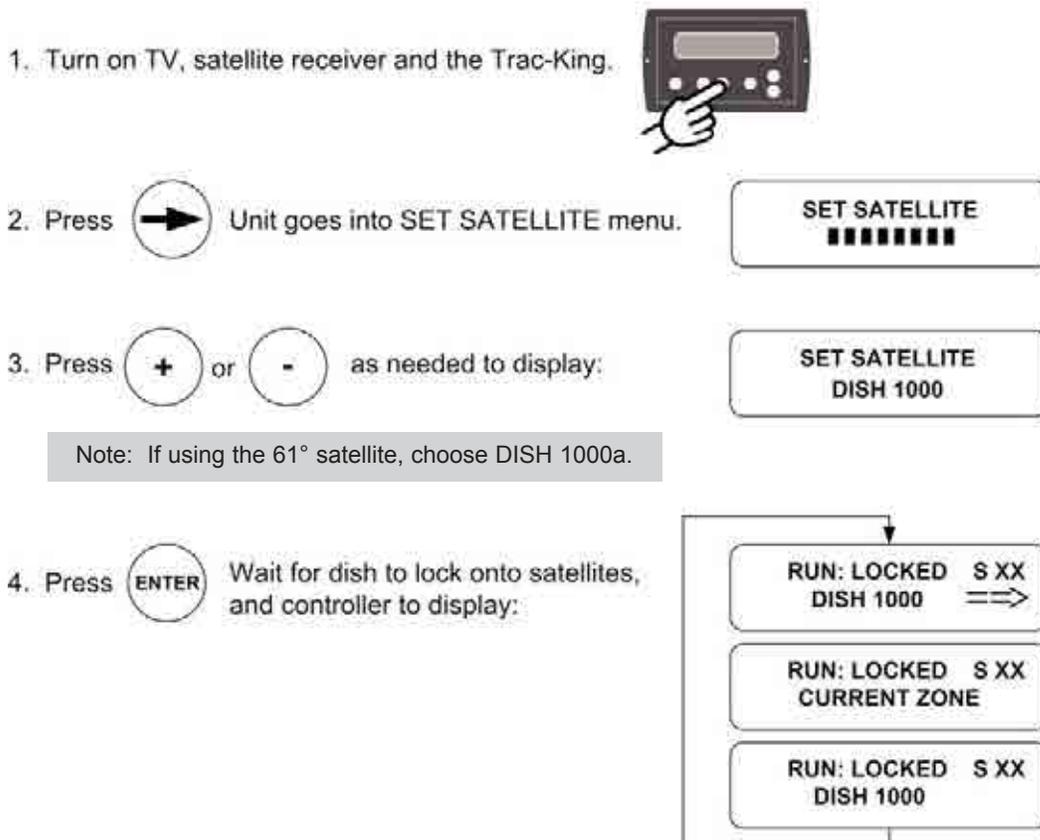
**IMPORTANT!** Even under perfect conditions, the 129 satellite may not be available everywhere. Customers in select areas, including New England, Florida, south Texas and parts of the West Coast may not be able to view HD programming from the 129 satellite based on geographical location.

If you are in these areas, and you cannot receive the 129 satellite, you can still use the DISH 1000 feature by selecting DISH 1000a from the satellite menu. This runs the checkswitch with the 61, 110, and 119 satellites. (The 61 satellite mirrors the HD programming from the 129 satellite.)

King Controls recommends using a Dish Network model VIP211 HDTV receiver for automatic satellite switching.

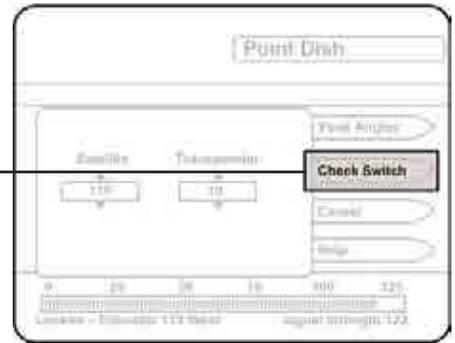
Note: The SW64 switch is a receiver software configuration that is loaded into the receiver after running a check switch test with the dish locked on and configured for Dish 1000 switching mode.

This is a one time procedure and will not need to be repeated after successful installation, unless the check switch test is run again while connected to a home dish system, or if you travel to another area and need to change the selected trio of satellites.

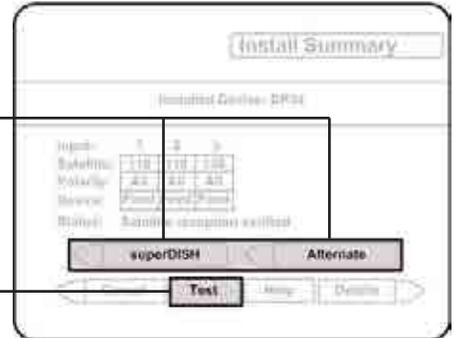


5. On receiver remote, press **MENU 6 1 1**.

6. Highlight **Check Switch** and press **Select**.



7. Make sure **Superdish** and **Alternate** boxes are **NOT** checked.

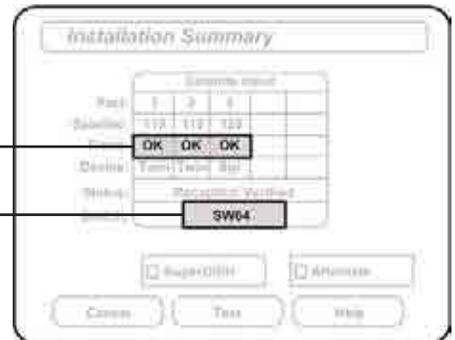


8. Highlight **Test** and press **Select**.

The unit will perform a check switch test, and the dish will periodically move back and forth. (This process will take several minutes.)

9. When test is complete, SW64 appears as the installed device, and there must be no "X"s in the indicated columns.

**NO "X"s**  
**MUST SHOW "SW64"**



Screen graphics may vary.

Note: Loading the SW64 may require several attempts due to geographical area and available satellite signal strength. If desired results are not obtained, verify there are no line of sight obstructions to the satellites. (Do this by choosing each satellite individually and verifying the Trac-King locks onto each one.) Choose DISH 1000 (or DISH 1000a) again and re-run the test. If test fails call King Controls at (800) 982-9920.

## OPERATION

Note: For better performance when using the automatic satellite switching feature, change channels by selecting your program from the channel guide rather than channel surfing.

1. Simply choose your desired channel using the receiver's remote control. The Trac-King will automatically switch to the appropriate satellite. (*Master receiver only.*)

Note on Error Messages: It is common to receive a temporary error message displayed on the TV when the antenna is switching between satellites or the signal has been blocked. If an error message appears for an extended period, selecting CANCEL may help clear the message more quickly.

Note: Unit must have software revision 5.22c or higher. See Section 9, Diagnostic Pages, to determine software revision of unit.

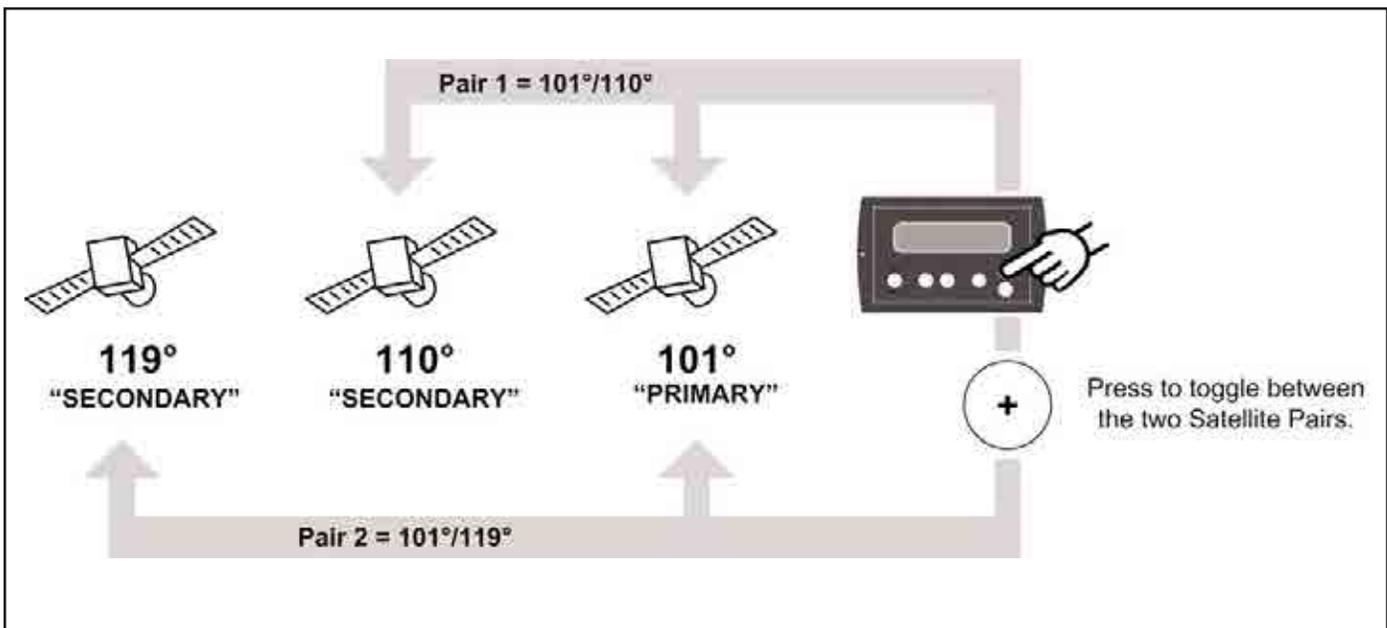
DIRECTV broadcasts most of its programming from the 101° satellite location. Some high definition programming is currently transmitted from the 101°, 110° and 119° Ku band satellites. The King Controls #9747 HDTV converter allows the Trac-King satellite antenna to receive DIRECTV's specially formatted programming available from the 110° satellite. Channels broadcast from the DIRECTV 101° and 119° satellites can be viewed without this accessory.

Note: These antennas are not designed to receive HD programming from DIRECTV's Ka band satellites at 99° and 103°.

You must have a High Definition Receiver, HDTV Monitor (TV), the proper HD cables (component video or HDMI) and the appropriate programming subscription in order to view HD programming. (Purchased separately.)

## SATELLITE PAIR SELECTION

Using the Trac-King controller, select the pair of DIRECTV satellites you want to track based on the programming you would like to view. The antenna will automatically switch between the selected pair of satellites when changing channels using your receiver's remote control. If you select an HD channel from the guide and the picture does not appear, the channel is located on the alternate satellite. To view this channel you will need to select the alternate pair by pressing (+) on the controller.



## OPERATION

**IMPORTANT! Select your current region first. Failure to select your current region may result in extraordinary delays in channel acquisition. (See Section 3, Operation.)**

Note: The Trac-King can only receive programming from one satellite at a time. If you change channels on your main receiver, and the Trac-King has to change satellites, you may lose the current programming on your second receiver.

1. Make sure your current region is selected. (See Section 3, Operation.)

2. Select your satellite pair.

SET SATELLITE  
DTV 101/110hd

SET SATELLITE  
DTV 101/119

Your channels are broadcast from 5 different satellite locations, and the antenna can be set to automatically switch between two satellites (101/110) or (101/119). If you select the (101/110) satellite pair on the controller, the antenna will automatically switch to the appropriate satellite when a channel broadcast from the 101 or 110 satellite is selected. In this example, if you select a channel that is broadcast from the 119 satellite, you will need to select the (101/119) satellite pair on the controller and then the antenna will automatically switch to the appropriate satellite when a channel broadcast from the 101 or 119 satellite is selected. (The Trac-King does not receive HD programming from DIRECTV's Ka band satellites at 99° and 103°.)

3. To change the selected satellite pair, simply press the  button on the controller.

Note: The program guide will show all channels available from the 101, 110, 119 satellites, however it may take up to an hour for this information to be downloaded into the receiver after the satellite is acquired. If all of your channels do not load in the guide within an hour, press the reset button on the front of your DIRECTV receiver.

When switching between satellites, the TV picture may be disrupted for a brief period while the receiver processes the signal from the satellite.

This HDTV converter accessory may only be used with Trac-King models with S/N 47891 or higher.

## SATELLITE SWITCHING

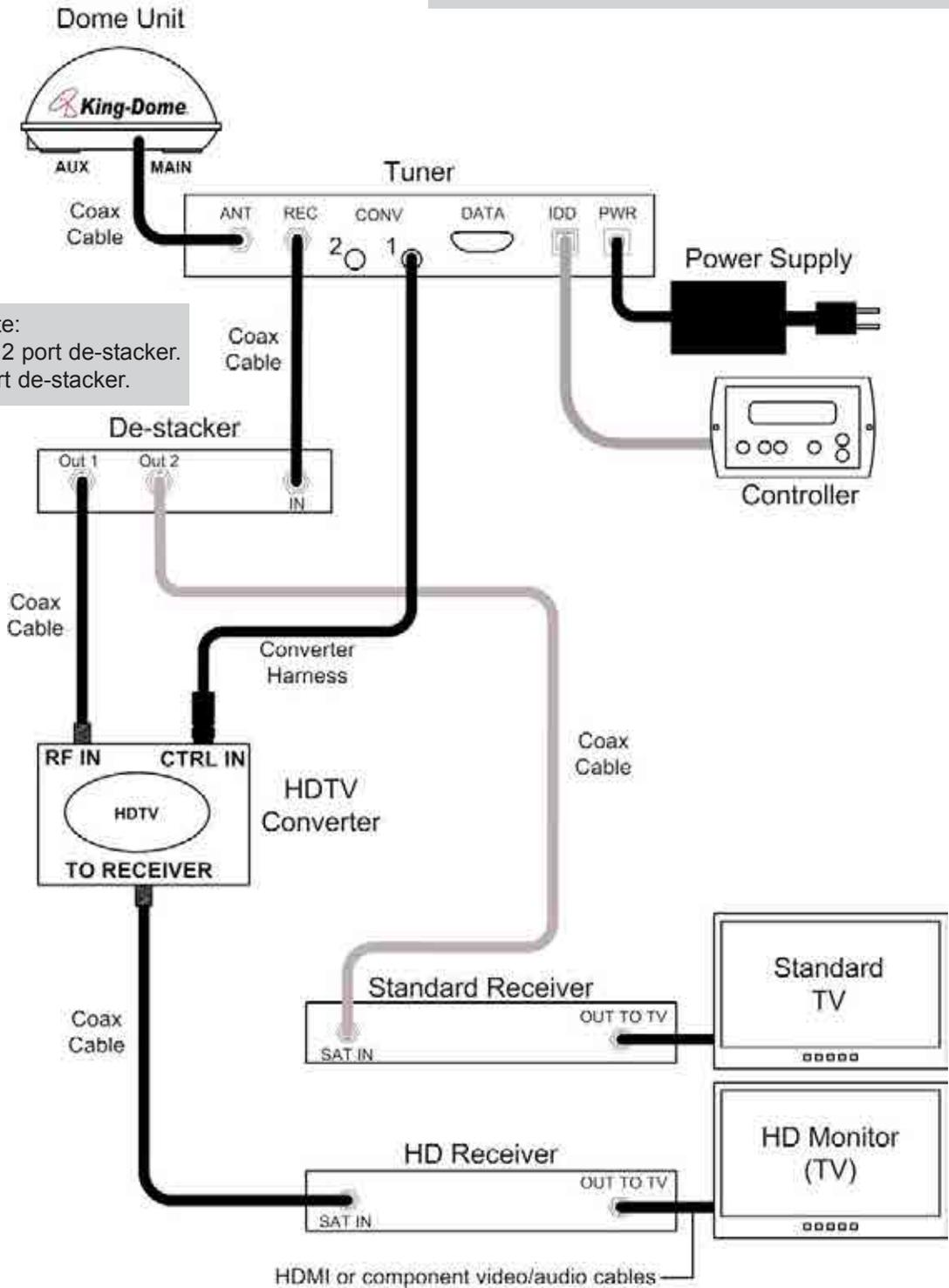
When you select a channel on the 110 or 119 satellite, the receiver emits a tone telling the antenna to switch satellites. If you have two receivers, the main receiver that is connected to the antenna tuner box will control the satellite switching. If a multi-switch is installed for connecting 2 HD receivers or 3+ receivers, any receiver can control the antenna switching if the last channel selected on all other receivers was on an odd transponder on the 101 satellite such as channel 202. (At the time of publication, channel 202 is broadcast on an odd transponder on satellite 101. This is subject to change. If in doubt whether channel 202 is still on an odd transponder, contact DIRECTV or call King Controls.)

# Single Output Rotary Joint - Dual LNB (with de-stacker)

(1) HD Receiver and (1) standard receiver

Note: DIRECTV units only. Dish Network units do not use the HDTV Converter.

Note:  
12" (LP) models = 2 port de-stacker.  
15" models = 4 port de-stacker.

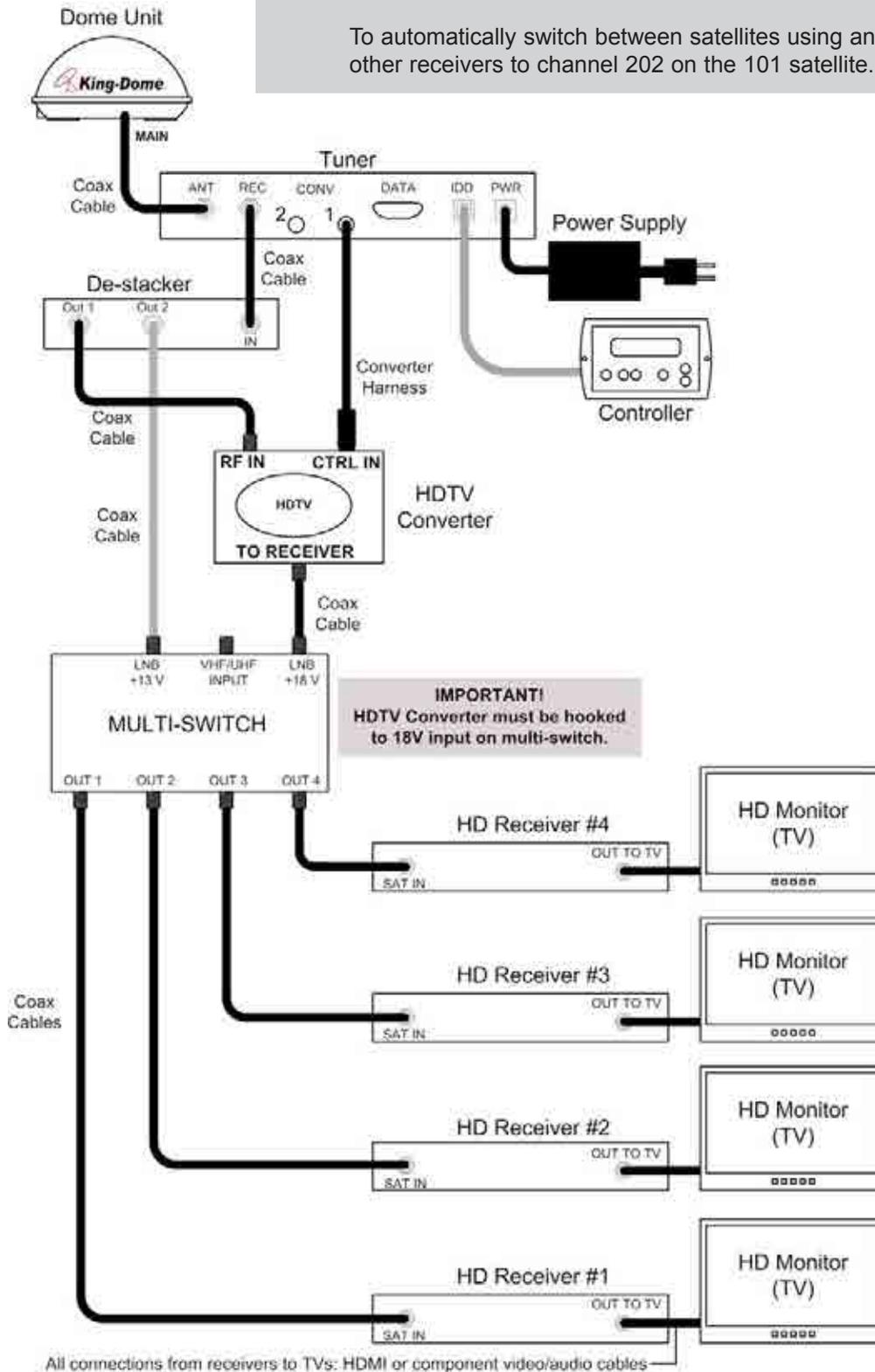


# Single Output Rotary Joint - Dual LNB (with de-stacker)

## (2) HD Receivers or multiple receivers

Note: DIRECTV units only. Dish Network units do not use the HDTV Converter.

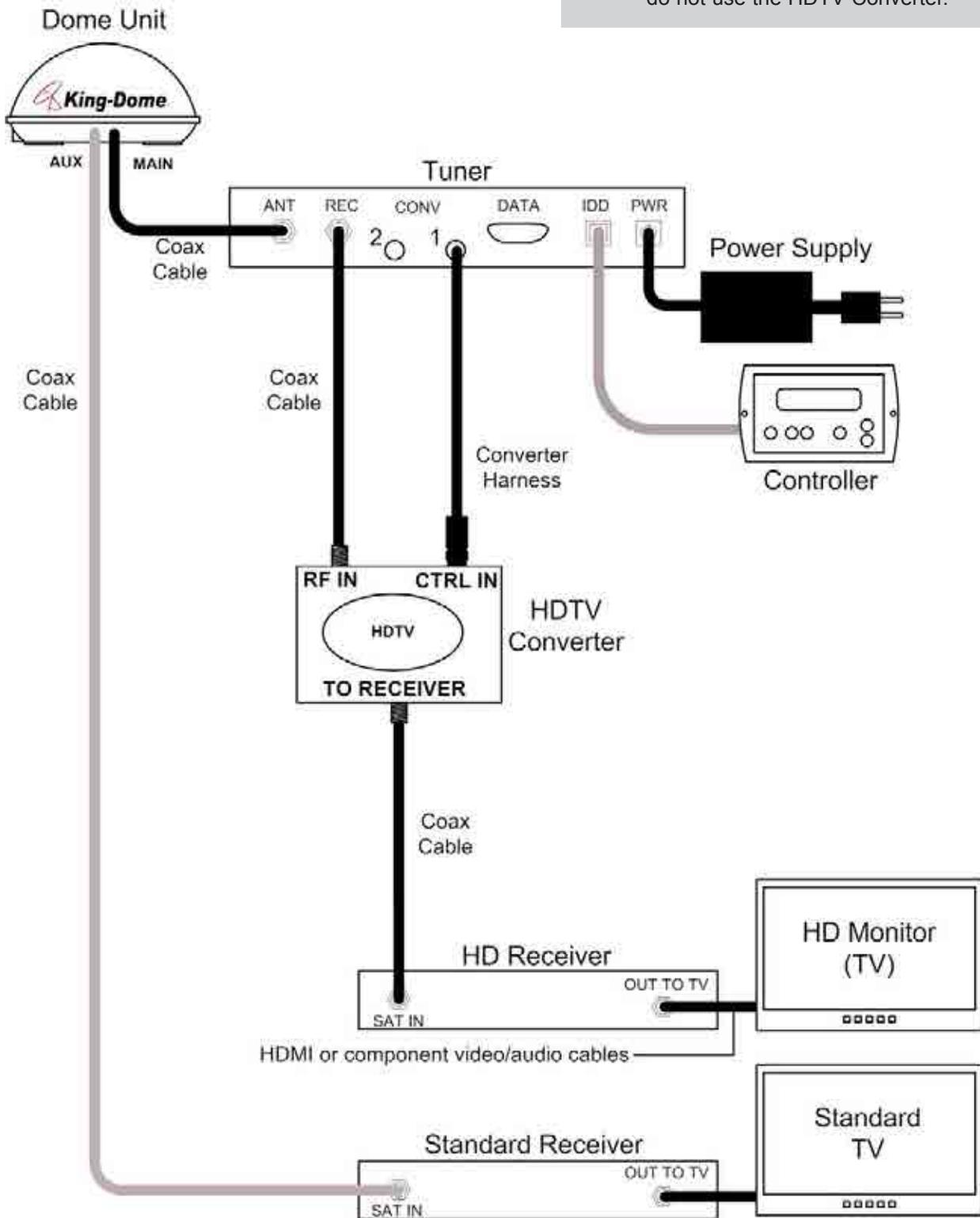
To automatically switch between satellites using any receiver, tune all other receivers to channel 202 on the 101 satellite.



# Dual Output Rotary Joint - Dual LNB

(1) HD Receiver and (1) standard receiver

Note: DIRECTV units only. Dish Network units do not use the HDTV Converter.

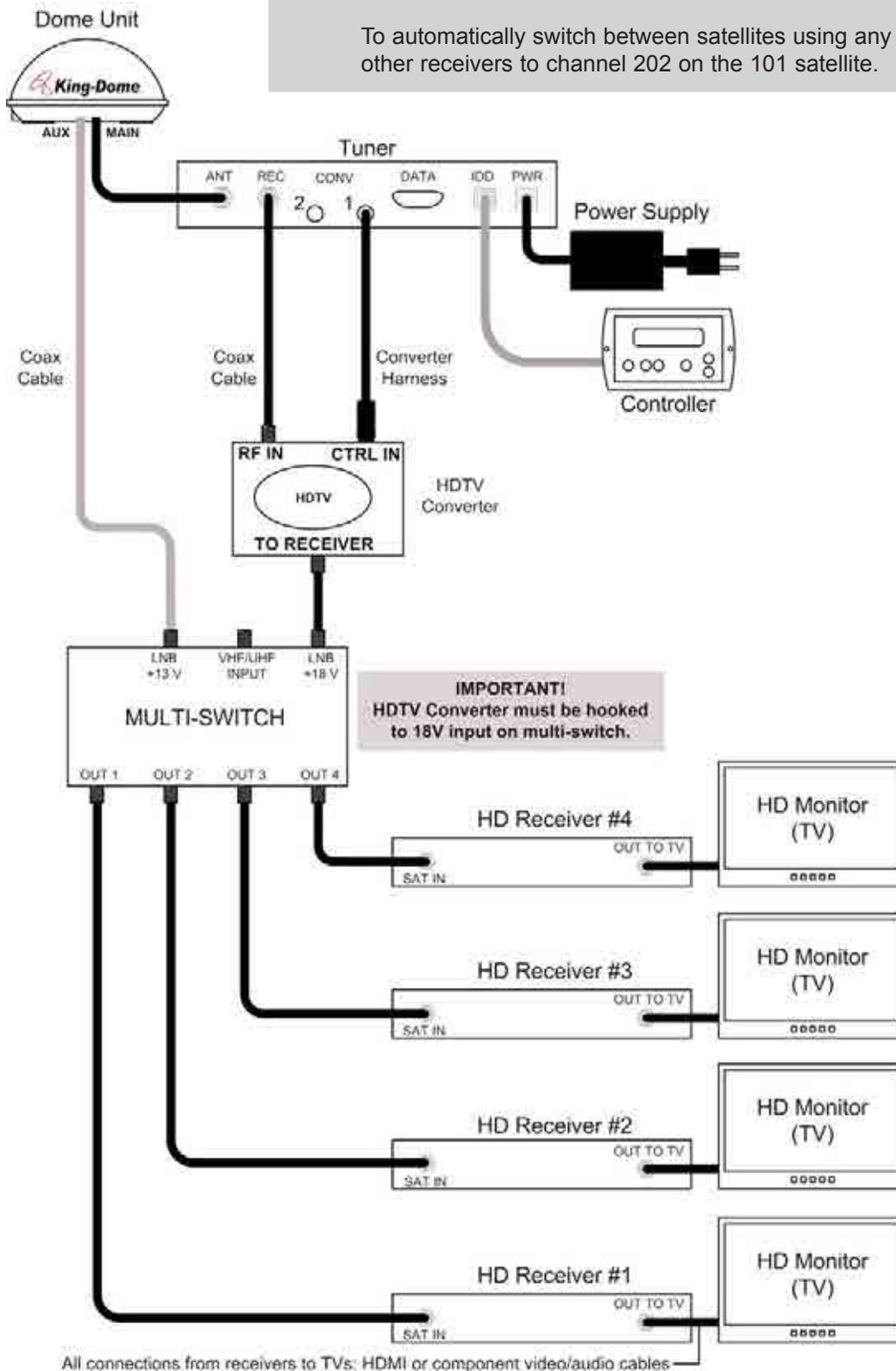


# Dual Output Rotary Joint - Dual LNB

## (2) HD receivers or multiple receivers

Note: DIRECTV units only. Dish Network units do not use the HDTV Converter.

To automatically switch between satellites using any receiver, tune all other receivers to channel 202 on the 101 satellite.



**IMPORTANT!**

Before performing any warranty work, you must call King Controls for a Service Order Number.

SYMPTOM	POSSIBLE SOLUTION
Controller does not power up.	Check: tuner is connected to power supply.  controller is connected to tuner.  power supply is plugged into 110 VAC outlet.
<b>Units that do not identify IDB version on power up:</b>  Controller remains in "Power Up, Please Wait" condition.	Disconnect power supply for 15 seconds, then reconnect.  Verify voltage on coax at dome unit is 24 VDC.  Inspect rotary joint cable, then reseal (inside dome unit).  Inspect all coax cables for kinks and verify connections are snug but not overly tight (inside and outside dome unit).
<b>Units that identify IDB version on power up:.</b>  Controller remains in one of the following conditions:  POWER TRIP  ANT COM ERROR?  TUNER COM ERROR?	Unplug tuner for 10 seconds, then plug back in.  Check coax cables and connections between tuner and dome unit.  Verify voltage on coax at dome unit is 24 VDC.  Inspect all coax cables for kinks and verify connections are snug but not overly tight (inside and outside dome unit).
<b>Units that do not identify IDB version on power up:</b>  Controller displays "Load Error."	Disconnect power supply for 15 seconds, then reconnect.  Inspect rotary joint cable, then reseal (inside dome unit).

SYMPTOM	POSSIBLE SOLUTION
<p>Controller displays AZ FAULT. Dish cannot rotate.</p>	<p>Verify shipping bolt(s) removed from bottom of dome unit.</p> <p>Disconnect power supply for 15 seconds, then reconnect.</p> <p>Perform <b>OPTION 21 RE-INITIALIZE and 0-RECALIBRATE</b> (see Section 7, Troubleshooting).</p>
<p>Display reads "EL FAULT."</p>	<p>Make sure shipping tie strap is removed.</p> <p>Disconnect power supply for 15 seconds, then reconnect.</p> <p>Restart system. If problem persists, perform <b>OPTION 21 RE-INITIALIZE and 0-RECALIBRATE</b> (See Section 7, Troubleshooting).</p> <p>Reseat ribbon cables inside dome unit.</p>
<p>Only getting signal on 1/2 of transponders.</p>	<div style="background-color: #e0e0e0; padding: 10px;"> <p><b>Single Rotary Joint Units (9760 and 9762 series):</b></p> <p>Verify De-stacker is installed (see Section 4, Wiring Schematics).</p> <p><b>IMPORTANT! The De-stacker must be installed with single rotary joint units, including 9762 series units with single rotary joints, even if only one TV and receiver are used.</b></p> </div> <p>Verify coax cables are properly terminated with <b>SNAP-N-SEAL®</b> connectors only (see Section 8, Reference).</p> <p>Verify receiver is operating properly.</p> <p>Verify LNB type is set correctly (See Section 9, Diagnostic Pages).</p>
<p>Can't get SW21 or SW 64 switch to load properly.</p>	<p>Check for line of sight obstruction.</p> <p>Check for low signal strength.</p> <p>Current location might be out of service area.</p> <p>Select alternate trio of satellites and try again.</p> <p>Atmospheric moisture. Wait for weather to improve.</p>
<p>Trying to load the SW21 or SW64 results in error or no satellite.</p>	<p>Disconnect DIRECTV HDTV Converter.</p>

SYMPTOM	POSSIBLE SOLUTION
<p>Unit never locks on or locks on and drifts off of satellite.</p>	<p>Atmospheric moisture. Unit will lock on as weather improves.</p> <p>Check for obstruction in sky in direction of satellite. Select another satellite and verify unit locks on.</p> <p>Verify coax cables are properly terminated with <b>SNAP-N-SEAL®</b> connectors only (see Section 8, Reference).</p> <p>Perform <b>OPTION 21 RE-INITIALIZE and 0-RECALIBRATE</b> (see Section 7, Troubleshooting).</p> <p>Inspect all coax cables for kinks and verify connections are snug but not overly tight (inside and outside dome unit).</p> <p>Perform <b>Temperature Calibration (CALL KING CONTROLS FIRST)</b>.</p> <p>Compass stick bad or not connected (See Diagnostic Page H in Section 9, Diagnostic Pages).</p>
<p style="text-align: center;">For DIRECTV HDTV Programming only:</p> <p>When a channel from the guide is selected, "Searching for Satellite" appears on the screen.</p>	<p>The new channel selected is not found within the currently selected pair. Press (+) to change the switching pair between 101/110 and 101/119 as necessary.</p>
<p>When a channel from the guide is selected, a different program appears on the screen.</p>	<p>The new channel selected is not found within the currently selected pair. Press (+) to change the switching pair between 101/110 and 101/119 as necessary.</p>

# TROUBLESHOOTING BLOCK TIMES

Time is listed in minutes.

Upper Rotary Cable	30
Tuner (IDB)	30
Display (IDD)	30
RF Box	30
Compass Stick	30
Actuator Unit	60

## Parts List

100291	7' Telephone cable (Tuner to Controller)
100238	Controller (IDD) (New)
100356-2	Tuner (IDB)
100365	Power Supply (New)
100365-1	Power Supply Cord (New)
9747	HDTV Converter Kit (for DIRECTV HDTV at 110° W)
9747-AM	HDTV Converter Kit (After Market) (for DIRECTV HDTV at 110° W)
100292-35	RG6, 2.2 GHZ Coaxial Cable (35 ft)
100292-7	RG6, 2.2 GHZ Coaxial Cable (7 ft)
1830	Dome Magic® (Spray Can)
1830-SP	Dome Magic® (Single Use Packet)
100062-3	Gel Filled Boot
10204	Snap'N'Seal® Coax Crimper
10211	Snap'N'Seal® Coax End
10201	Coax Stripper
6405-1	Dome Screw (for bases with brass inserts)
6507	Dome Screw (for bases with no brass inserts)

# OPTION 21 RE-INITIALIZE AND 0-RECALIBRATE

**IMPORTANT!** You must call King Controls before performing this procedure.

1. Press **MAIN** as needed  
to enter DEALER SETUP menu.



DEALER SETUP ==>  
CODE 0

2. Press **+** as needed to scroll up to CODE 13.  
Press **ENTER**

DEALER SETUP ==>  
CODE 13

3. Press **→** as needed to enter SET OPTION menu.

SET OPTION  
OPTION 0

4. Press **-** as needed to scroll down to OPTION 21.  
Press **ENTER** to re-initialize software.

SET OPTION  
OPTION 21

LOADING  
PLEASE WAIT

5. Wait until display shows OPTION 0.  
(May take up to 30 seconds.)

SET OPTION  
OPTION 0

- Press **ENTER** and **-** simultaneously to shut  
system off.

off

6. Disconnect power (110 volt power supply)  
from tuner for 10 seconds, then reconnect.

**WAIT 10 SECONDS!**



7. Wait until controller shows "off" then press **ON** to  
start system.

off

8. Wait for system to load.

POWER UP  
PLEASE WAIT

IDB2 VER x.x

When display shows RUN: SCAN ALIGN,  
press  to enter IDLE/HOLD mode.

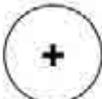
IDLE/HOLD SXX  
NOW on ? ==>

9. Press  to enter USER SETUP menu.

USER SETUP ==>  
Rev xxxx sn xxxxx

10. Press  to enter SET REGION menu.

SET REGION  
■■■■■■■■

11. Press  or  as needed to display  
0-RECALIBRATE.

SET REGION  
0-RECALIBRATE

12. Press  System recalibrates gyros.

RUN: SCAN ALIGN  
0-RECALIBRATE

13. Press  to exit IDLE/HOLD mode.

RUN: SCAN ALIGN

System will continue to run during recalibration process. Recalibration is complete when 0-RECALIBRATE no longer scrolls across bottom of display with search information. May take up to 10 minutes.

14. System continues to run after recalibration is complete.

RUN: SCAN ALIGN  
DTV 101

# TEMPERATURE CALIBRATION

**IMPORTANT!** You must call King Controls before performing this procedure.

1. Press **MAIN** as needed  
to enter DEALER SETUP menu.



DEALER SETUP ==>  
CODE 0

2. Press **+** as needed to scroll up to CODE 13.  
Press **ENTER**

DEALER SETUP ==>  
CODE 13

3. Press **→** as needed to display SET TEST-NONE.

SET TEST  
NONE

4. Press **-** as needed to display TEMP CAL.  
Press **ENTER** Display now shows:

TEMP CAL

SET TEST cancel  
TEMP CAL

5. Press **+** as needed to display:

SET TEST RUN NOW  
TEMP CAL

6. Press **ENTER** to start calibration.

TEMPERATURE CAL  
ST. XX

When finished, display shows CALIBRATION COMPLETE.

CALIBRATION COMPLETE

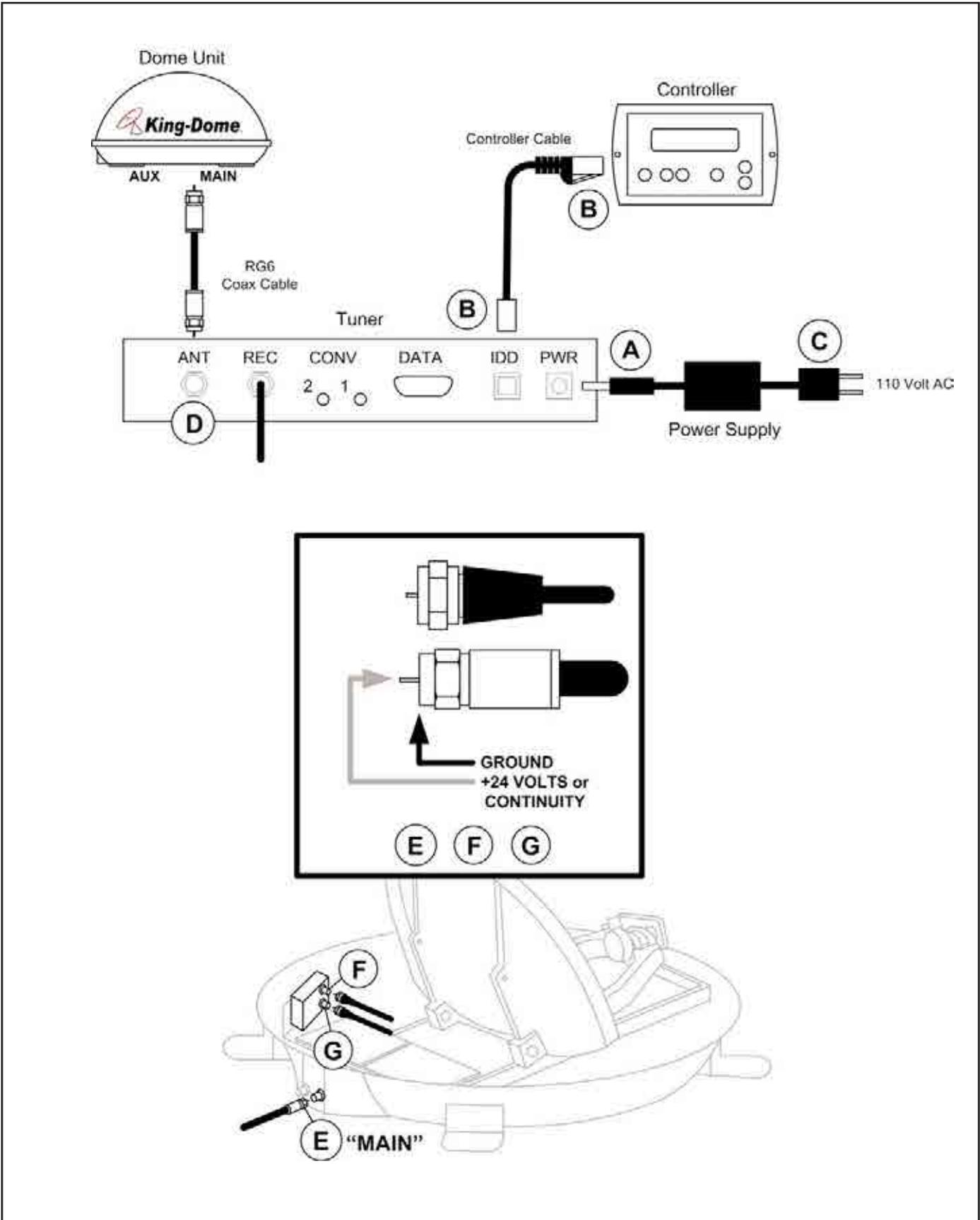
7. Disconnect power supply (110 VAC) for at least one hour to allow unit to cool internally.



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# WIRING DIAGRAM FOR FLOWCHART

## Single Rotary Joint

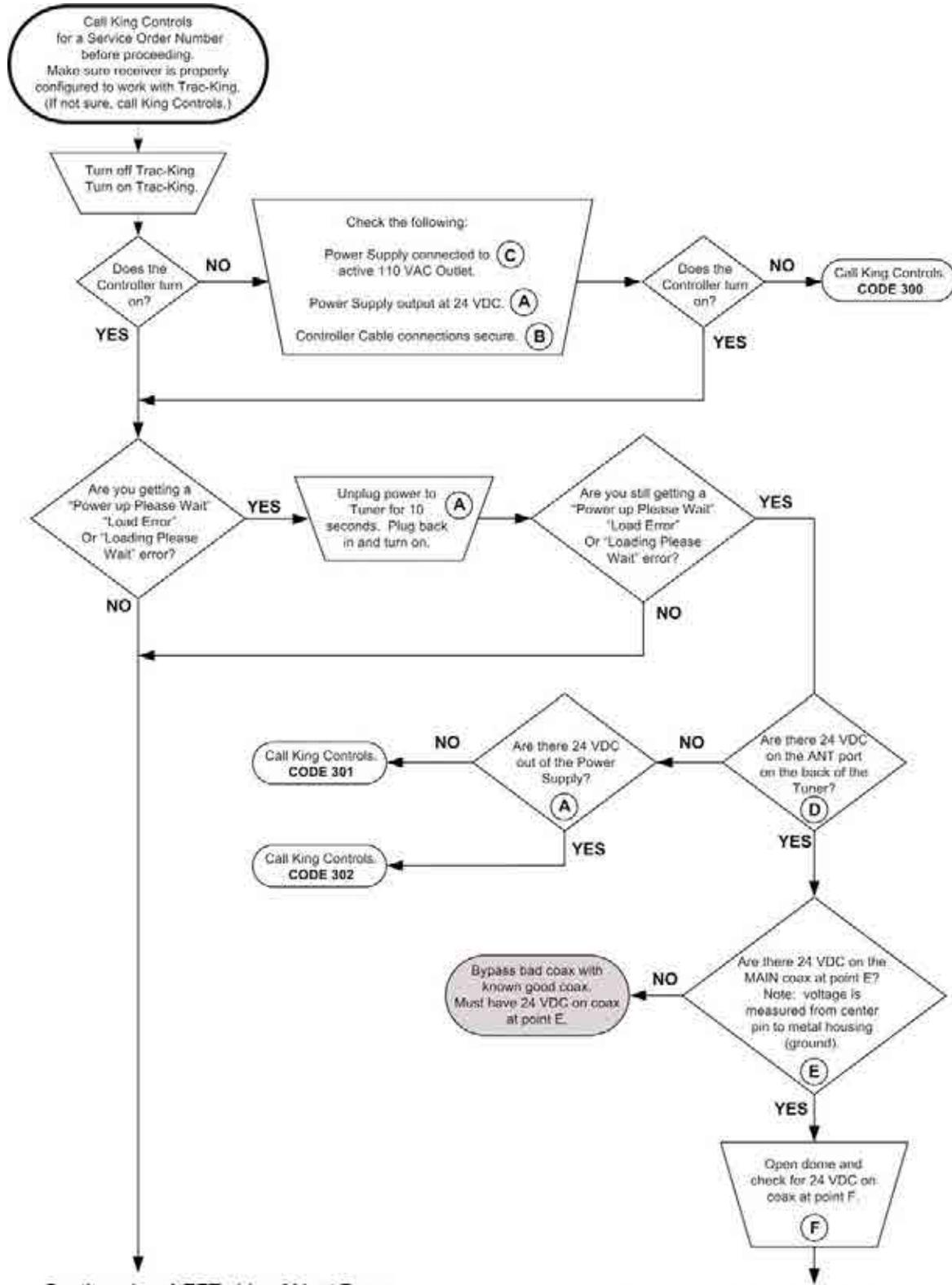


# FLOWCHART

## Single Rotary Joint

**IMPORTANT!** Before performing any warranty work, you must call King Controls for a Service Order Number.

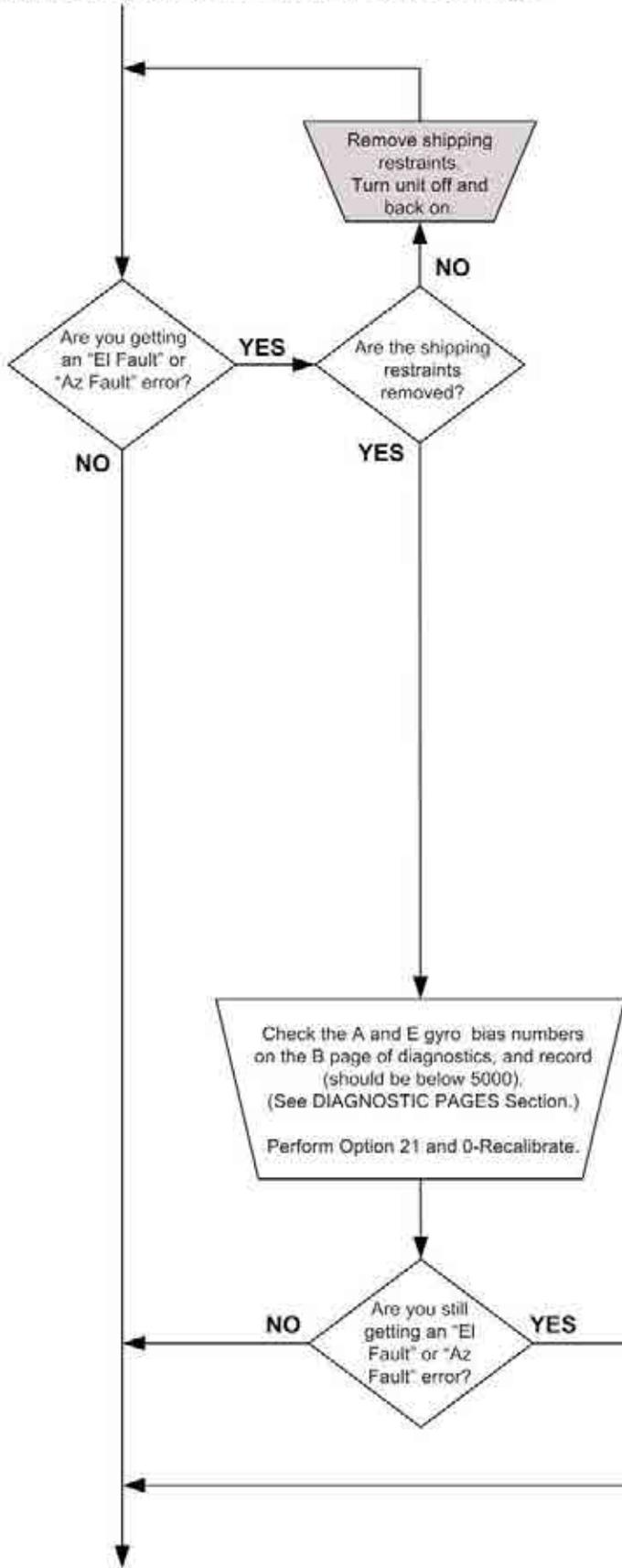
Note: Non-warrantable issues are indicated by, but not limited to, grey boxes in flowcharts.



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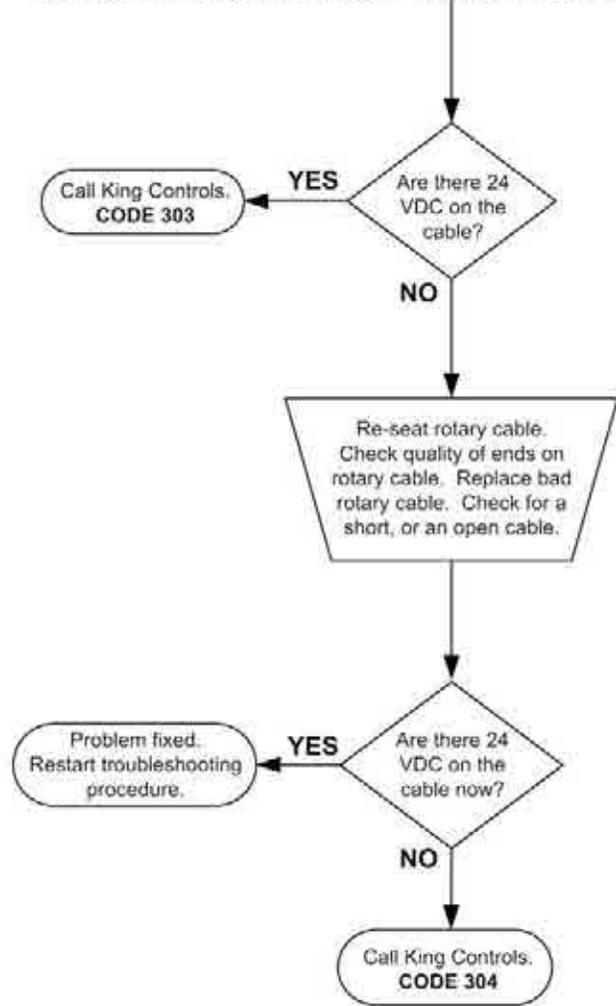
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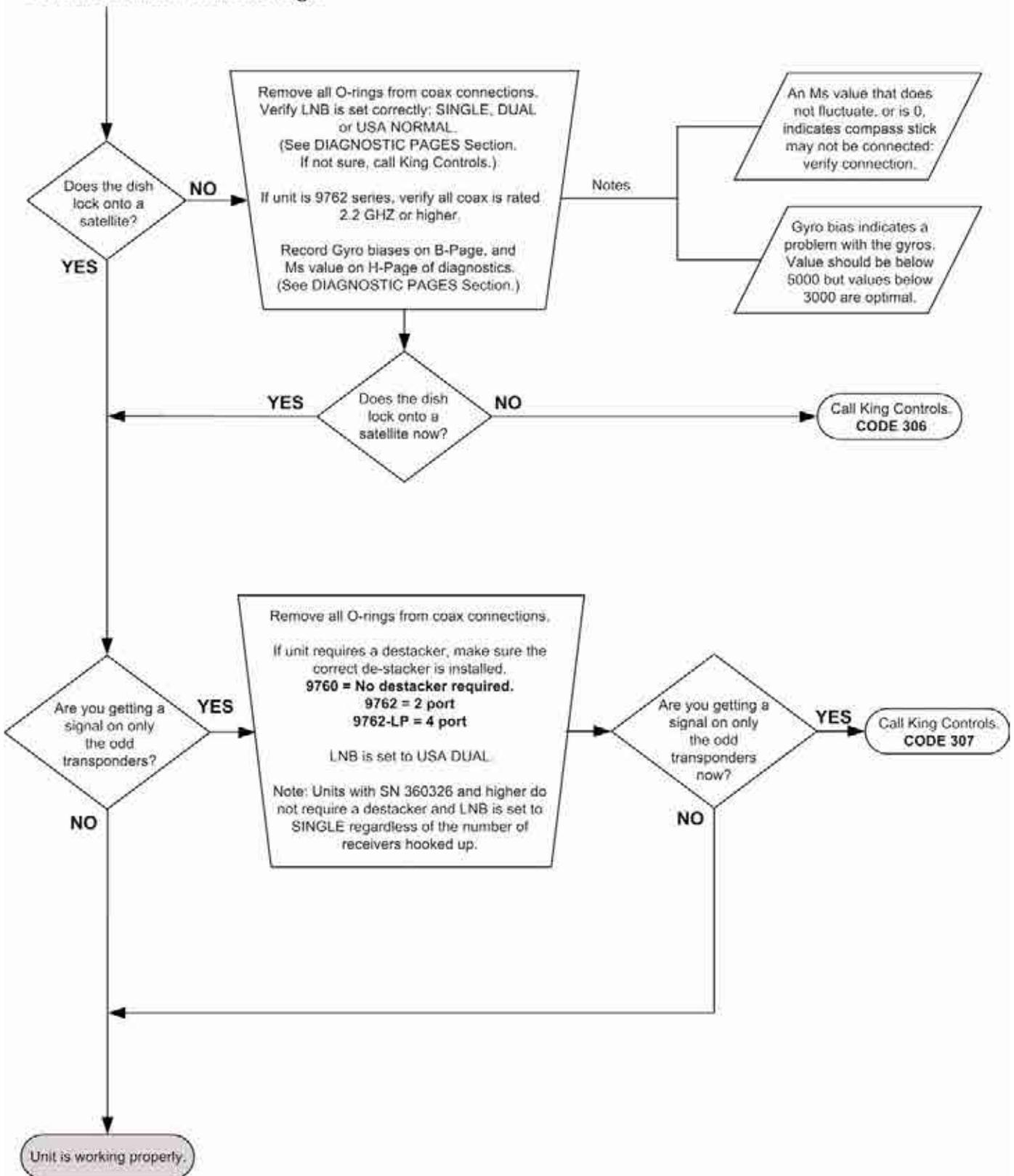


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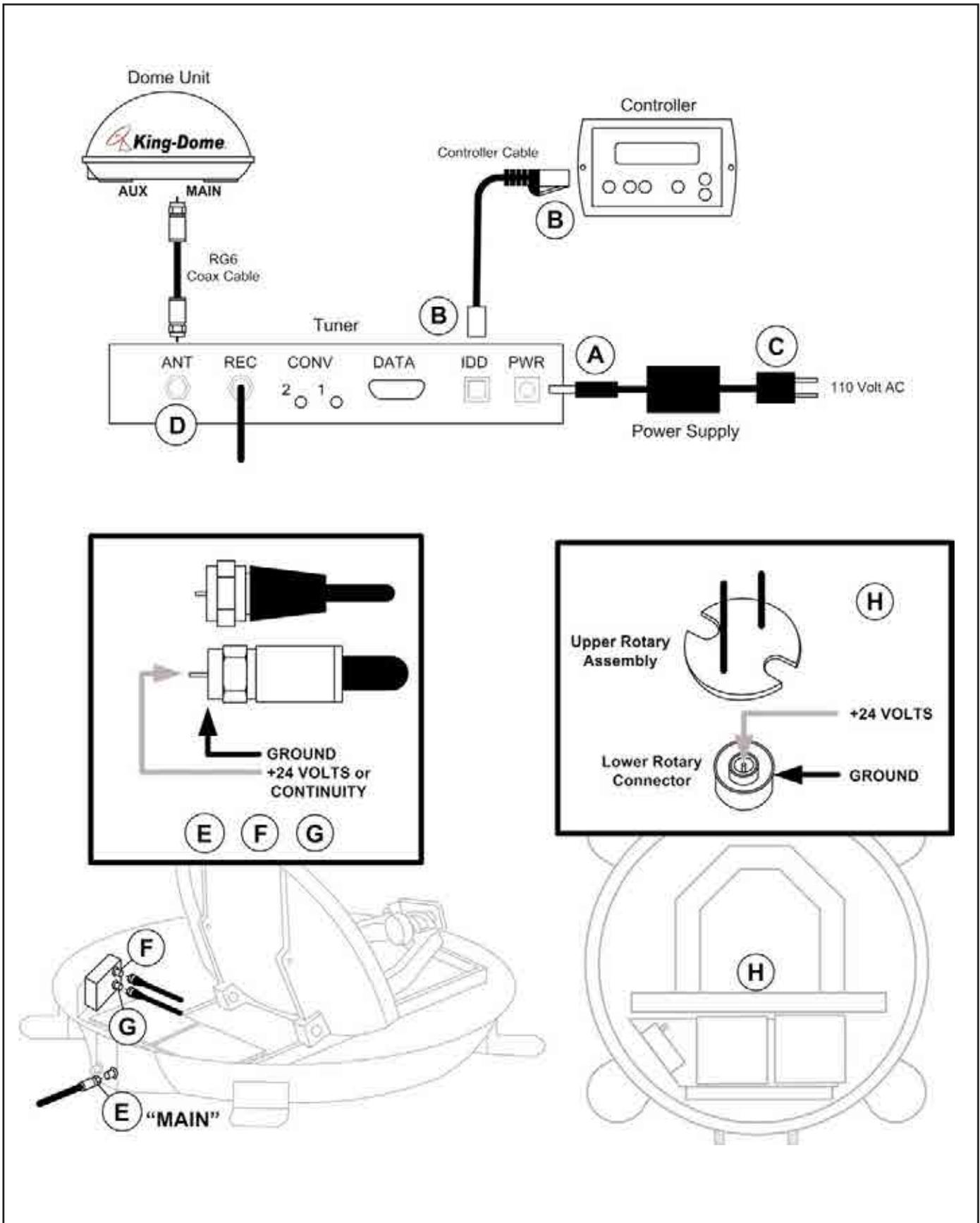


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# WIRING DIAGRAM FOR FLOWCHART

## Dual Rotary Joint

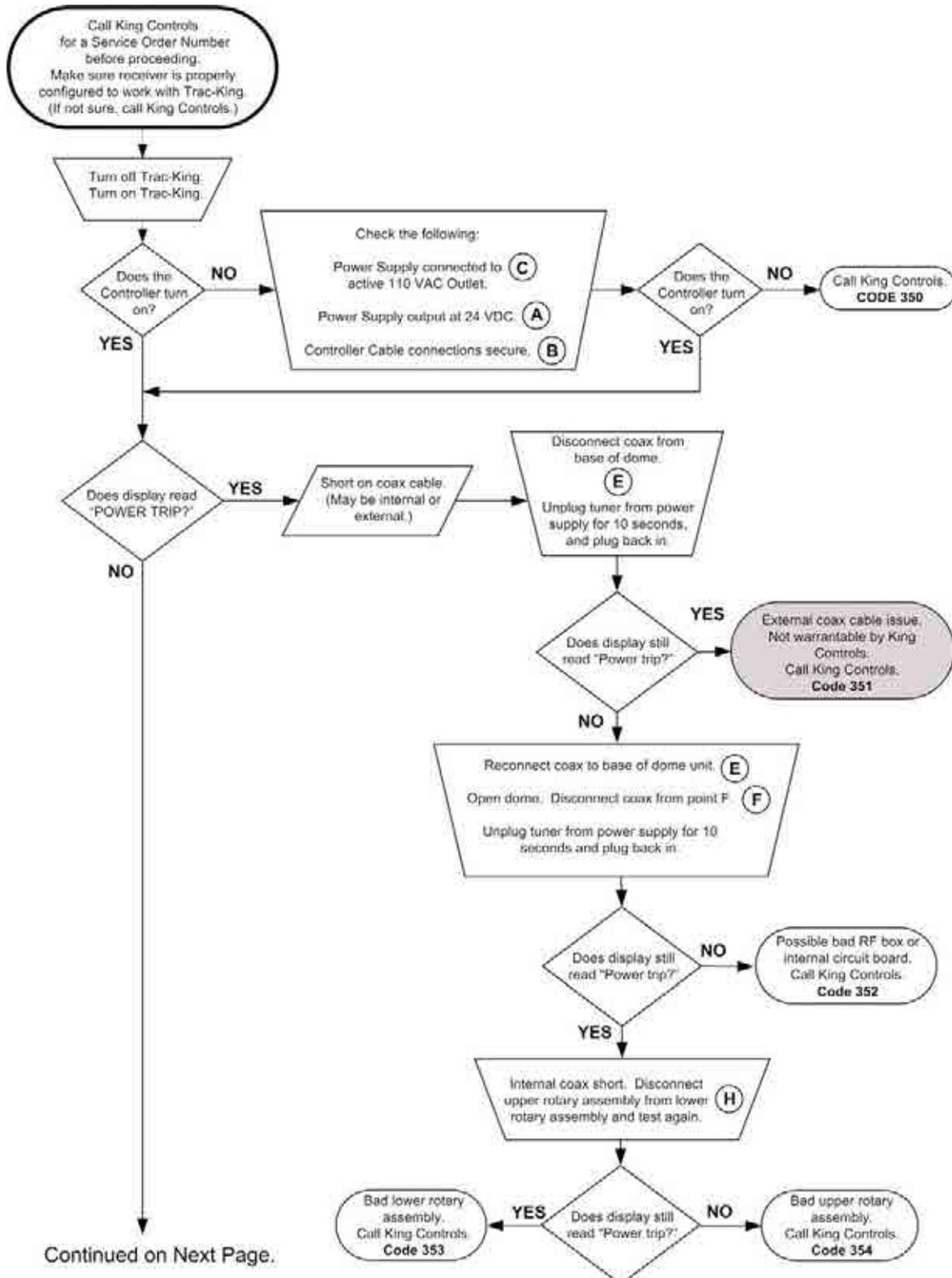


# FLOWCHART

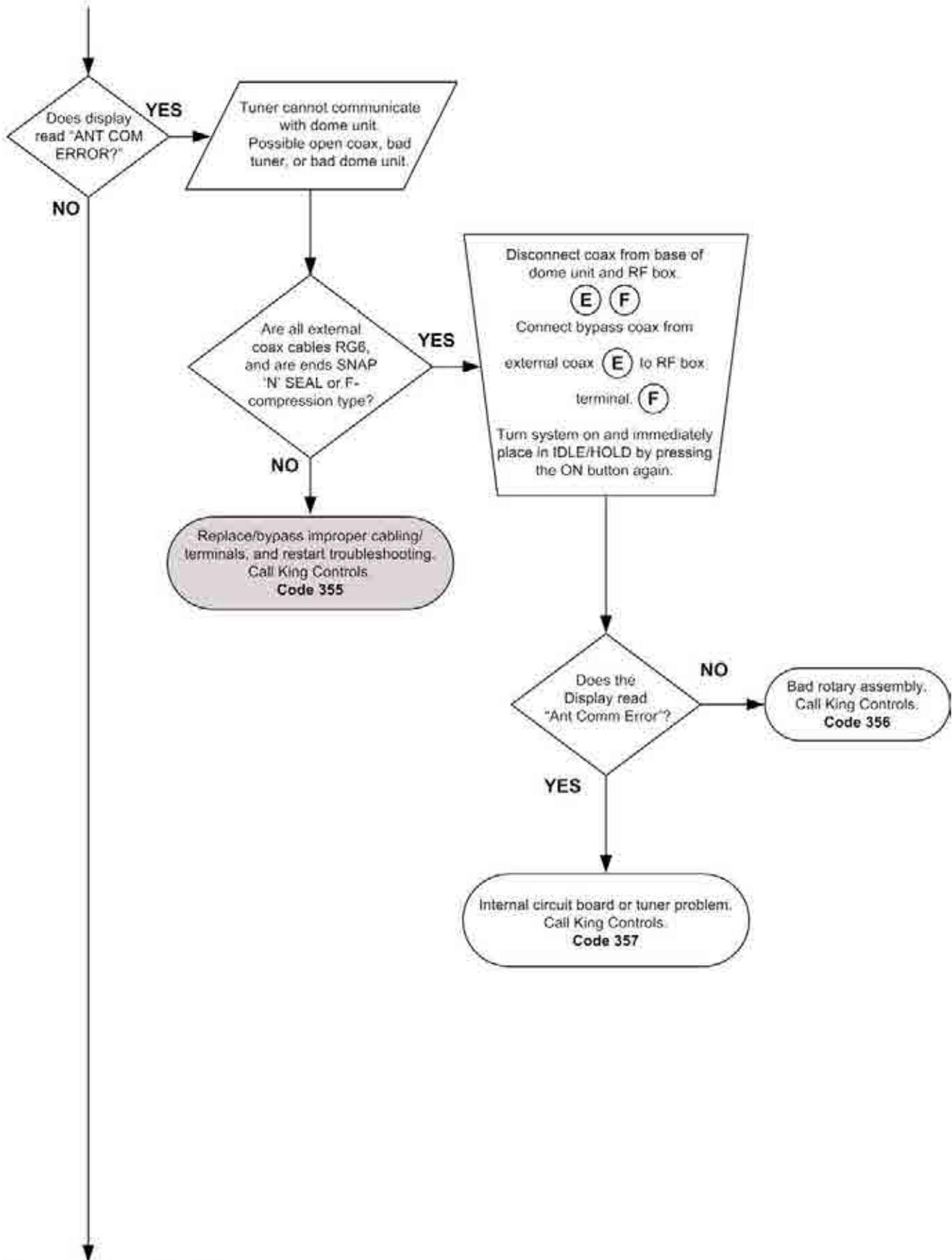
## Dual Rotary Joint

**IMPORTANT!** Before performing any warranty work, you must call King Controls for a Service Order Number.

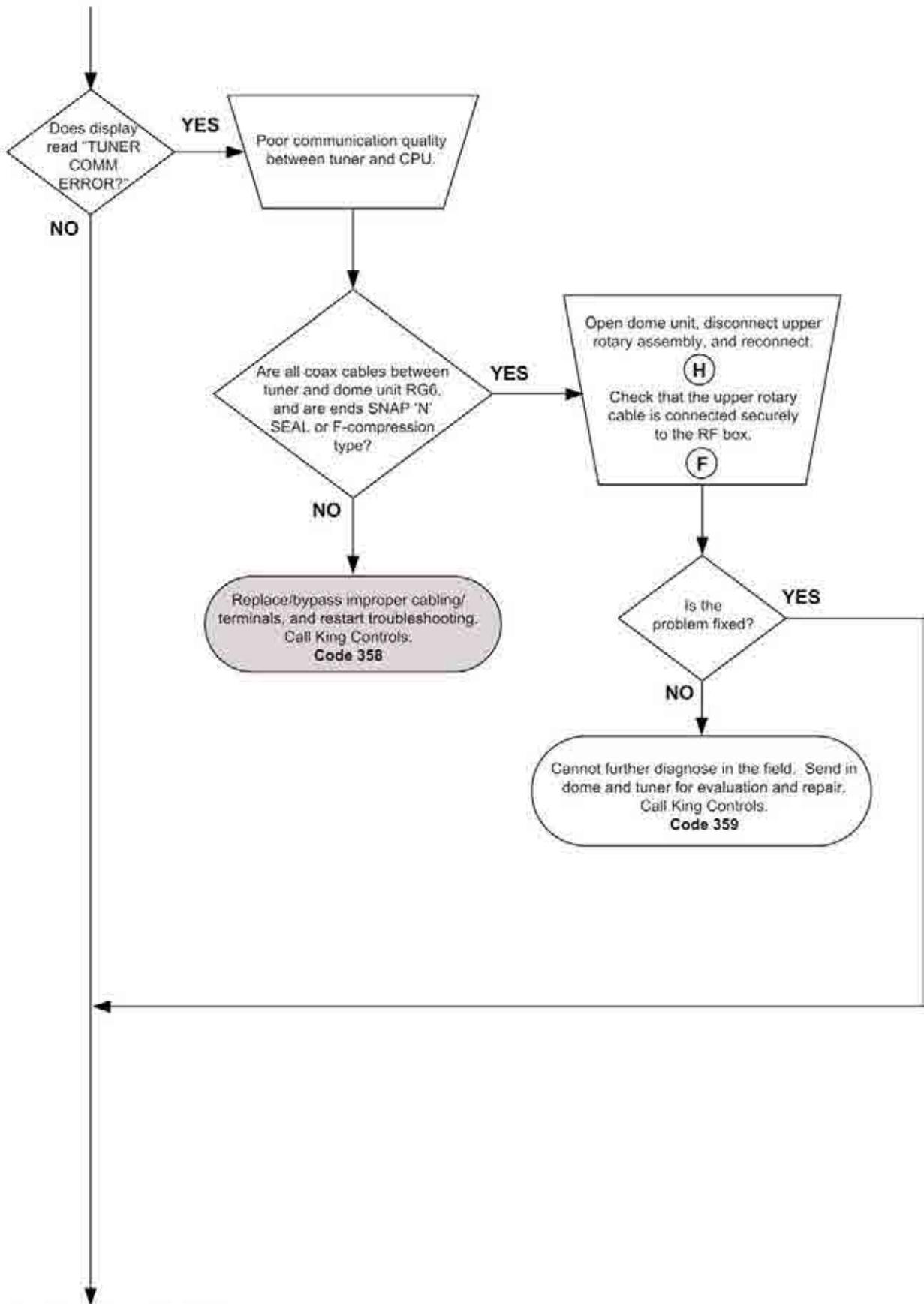
Note: Non-warrantable issues are indicated by, but not limited to, grey boxes in flowcharts.



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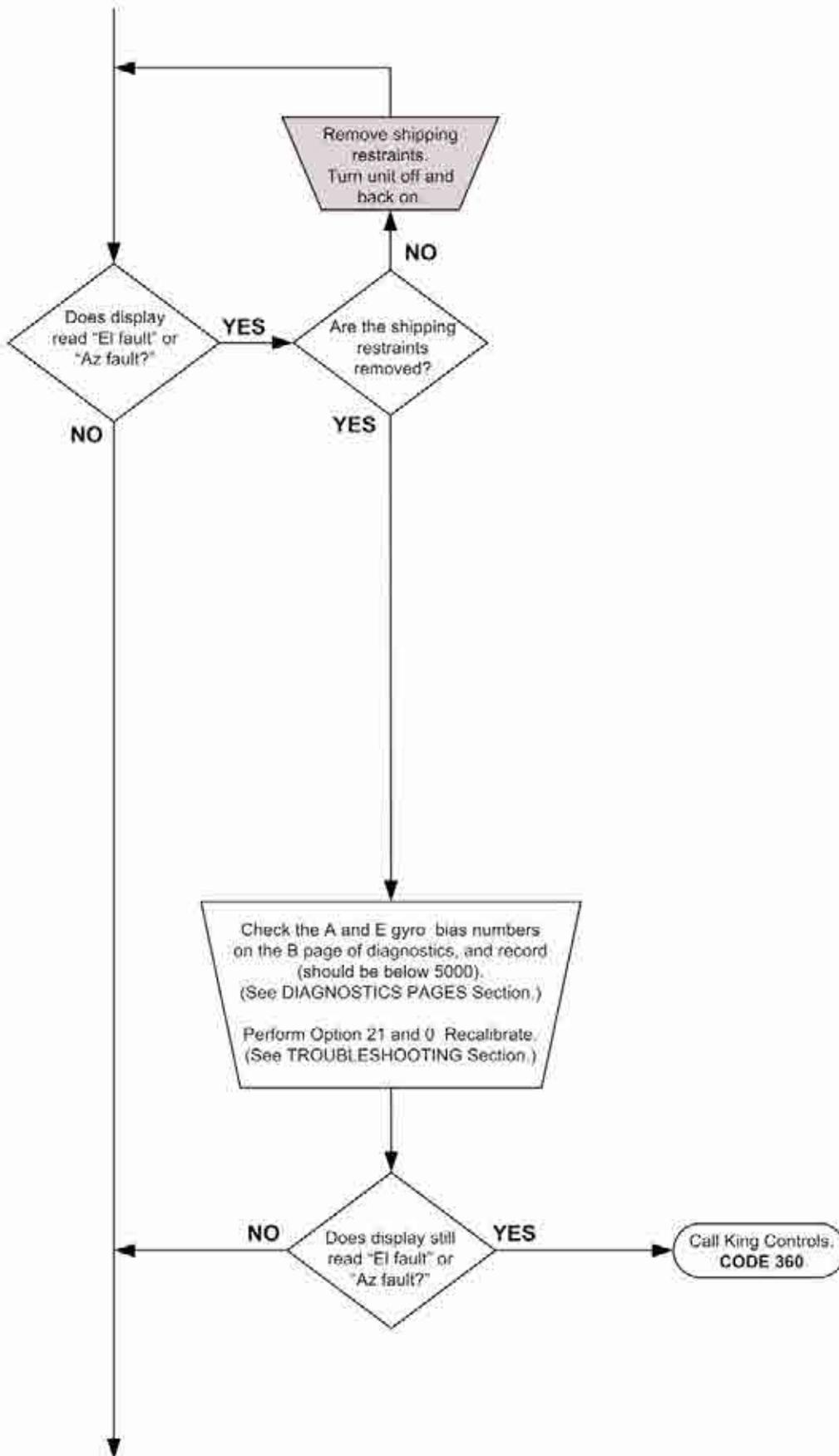


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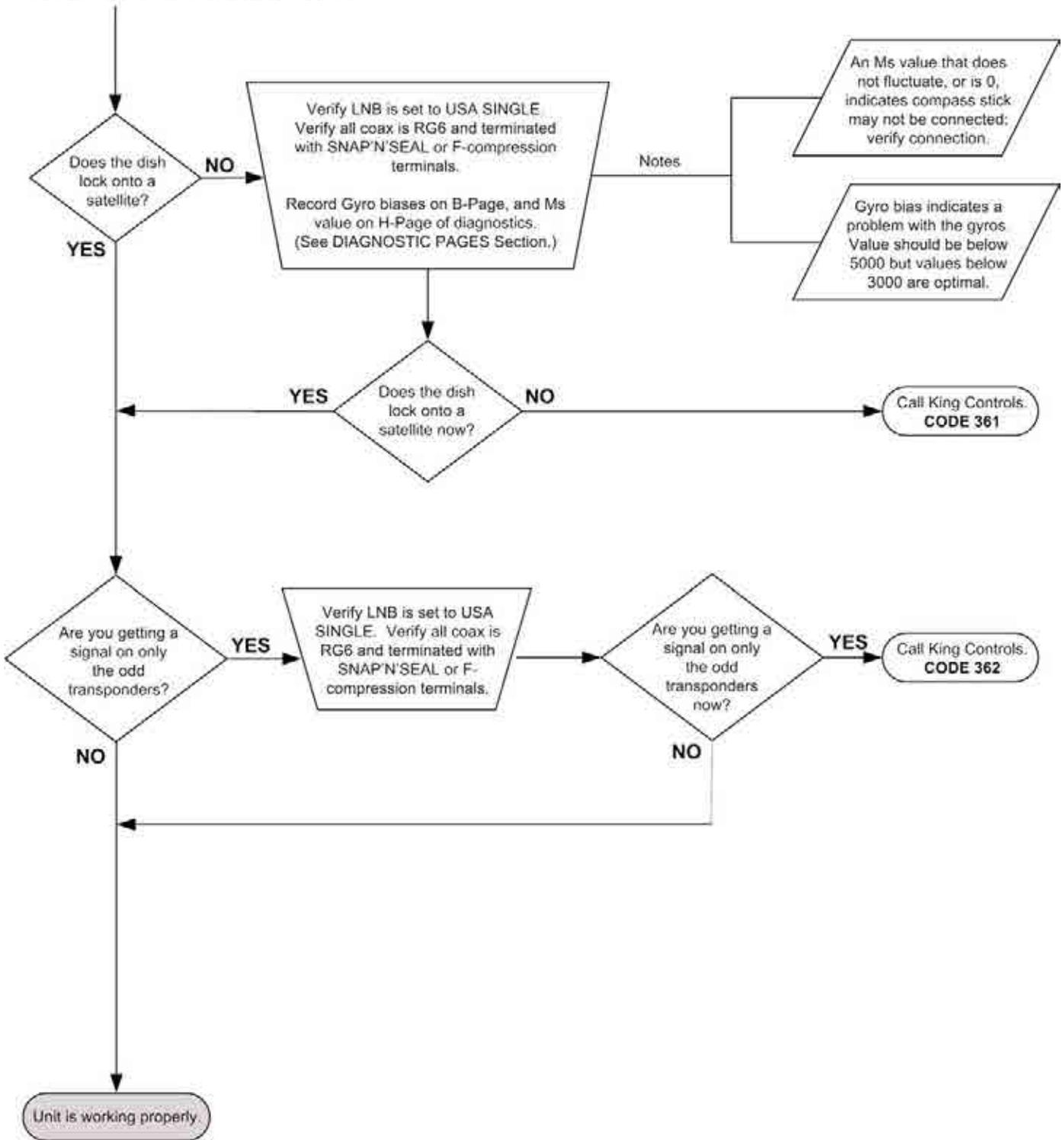
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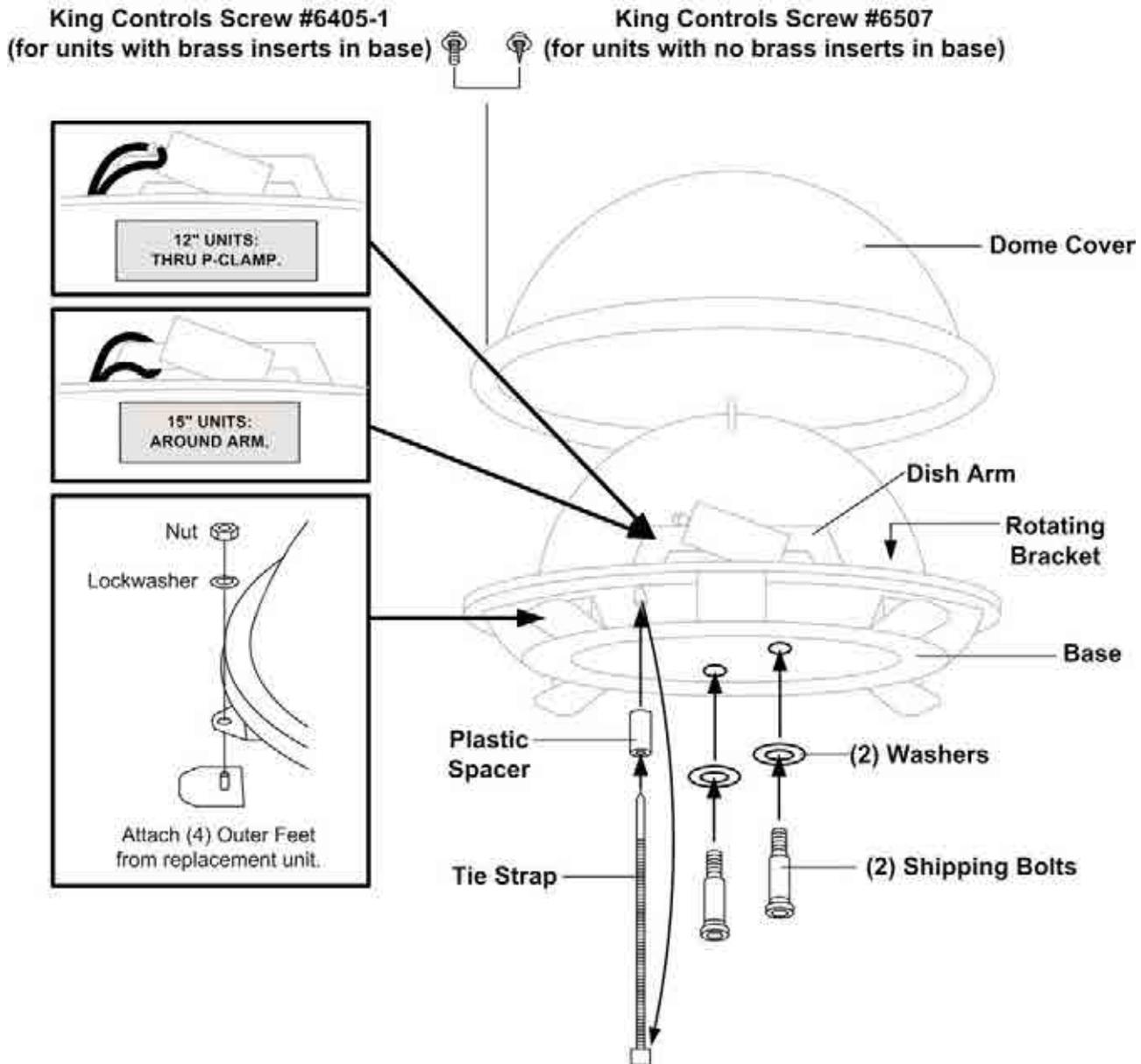
## RETURN SHIPPING

**IMPORTANT!** When returning a unit, you must package it in the box from the replacement unit. Use all included internal packaging, and be sure to attach outer feet removed from new unit.

If you are returning a unit and do not have a King Controls box, call King Controls for a return shipping box and kit (800 982-9920).

1. Turn rotating bracket to align shipping bolt hole(s) with hole(s) in base.  
(Some units may only have one shipping bolt.)
2. Insert shipping bolt(s) thru washer(s) and base and FINGER TIGHTEN into rotating bracket.
3. Lower dish arm. (Gently push on dish and arm simultaneously. Lower until arm is just about to touch mechanical stop.)
4. Insert tie strap thru plastic spacer and base, loop around dish arm for 15" models or through P-clamp for 12" (LP) models, and back through base.
5. Terminate tie strap. (DO NOT OVER TIGHTEN TIE STRAP.)
6. Attach (4) outer feet from replacement unit with lock washers and nuts.
7. Fasten dome cover to base. **MAKE SURE YOU ARE USING CORRECT SCREW TYPE.**  
Tighten screws until washers deform slightly.

# Return Shipping Diagram



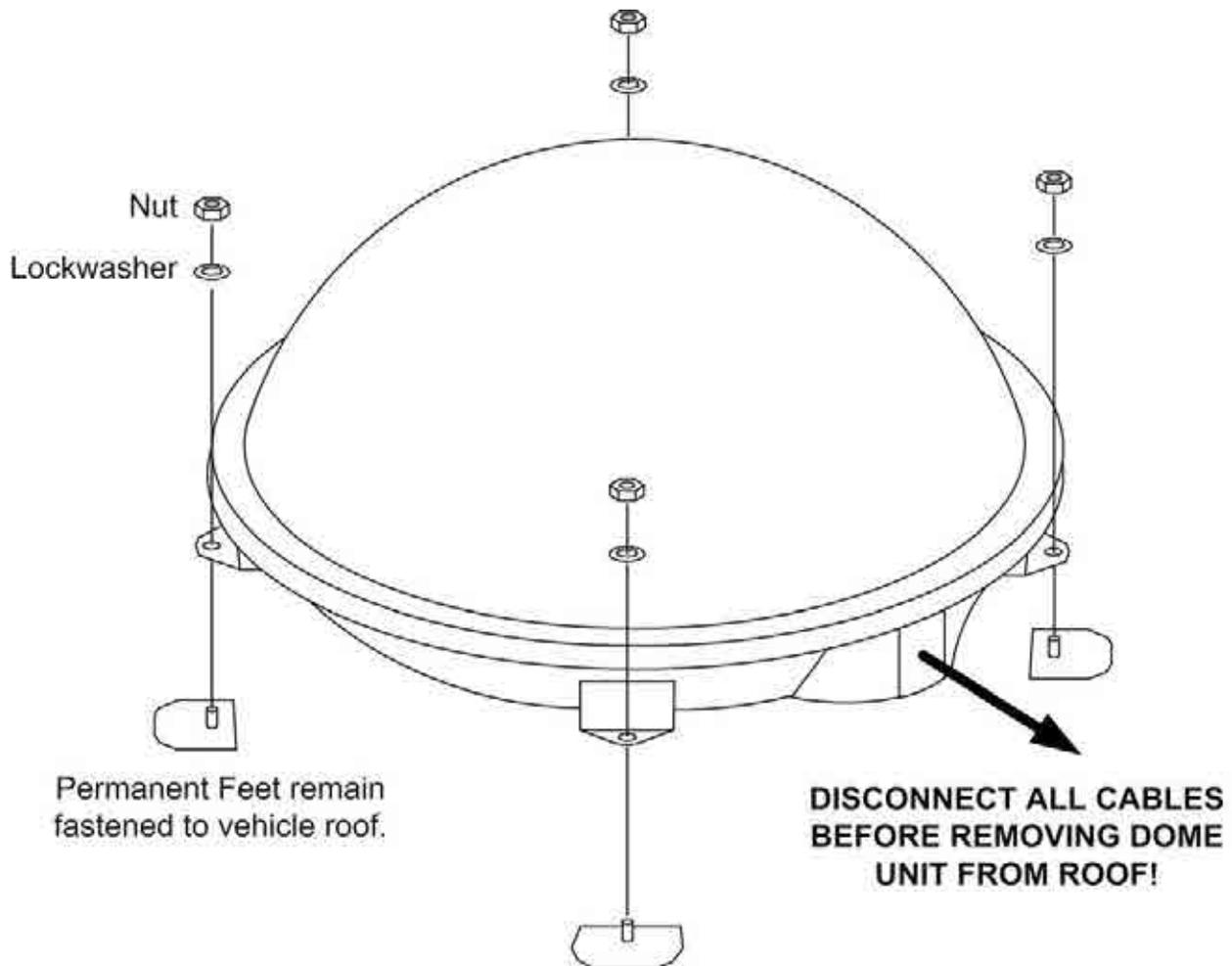
**IMPORTANT! DO NOT OVER TIGHTEN SHIPPING BOLTS. FINGER TIGHTEN ONLY.**

Note: Some units may have only one shipping bolt.

## 2 PART REMOVABLE DOME FEET

Note: Newer Trac-King models feature a two part foot. This enables the dome unit to be easily removed from the roof of the vehicle without compromising the roof seal.

**IMPORTANT!** Be sure to disconnect all cables from the back of dome unit before removing from roof.



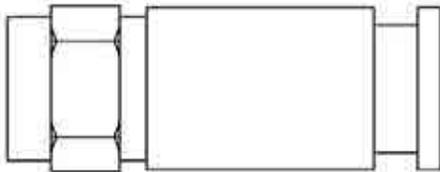
# COAXIAL CABLE REQUIREMENTS

**IMPORTANT! USE ONLY THE COAXIAL CABLES SUPPLIED WITH THE TRAC-KING. COIL AND STORE EXCESS CABLE IN THE CABINET WITH THE COMPONENTS. DO NOT CUT COAX.**

If coaxial cable other than that supplied with the Trac-King is used, the following guide lines must be followed:

- 1) Ends must be terminated with SNAP-N-SEAL<sup>®</sup> connectors.  
**(DO NOT USE TWIST-ON OR HEX-CRIMPED CONNECTORS.)**
- 2) Cable must be RG6 and rated at 2.2 GHz or higher.

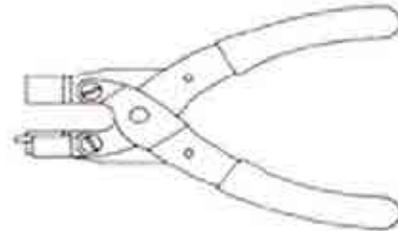
## SNAP-N-SEAL<sup>®</sup> CONNECTOR



Thomas and Betts part # SNS 1P6

King Controls part # 10211

## CRIMPER

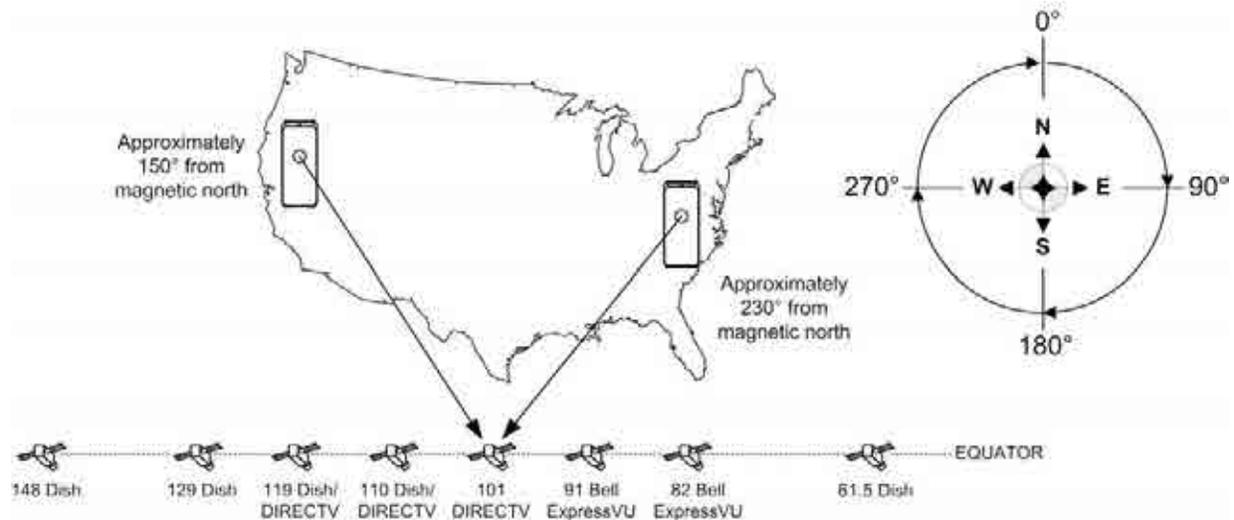


Thomas and Betts part # SNSUTL

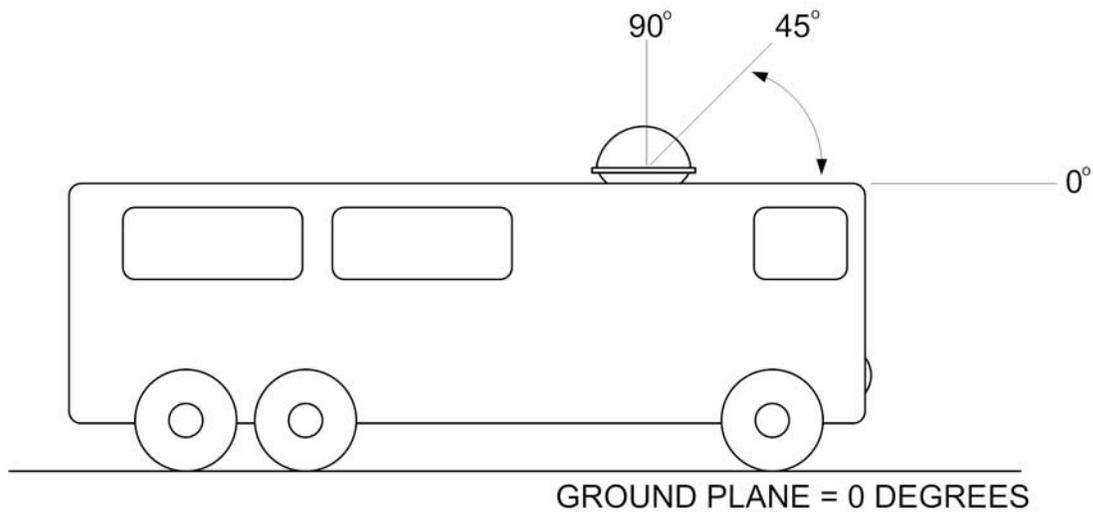
King Controls part # 10204

# DEFINITION OF AZIMUTH AND ELEVATION

**AZIMUTH:** Angle in degrees measured clockwise from Magnetic North ( $0^\circ$ ).



**ELEVATION:** Angle in degrees measured from the ground plane.





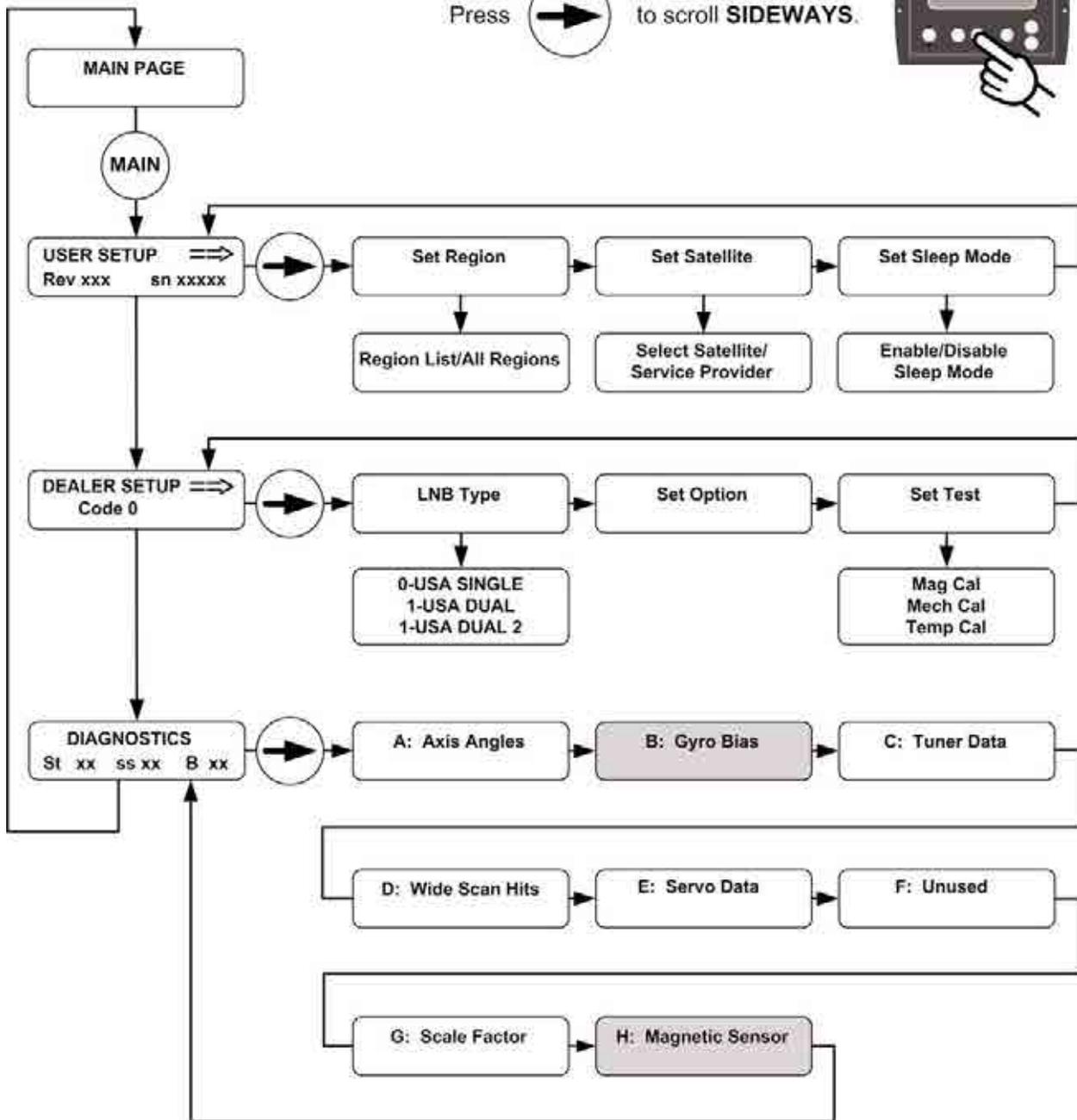
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## TRAC-KING CONTROLLER NAVIGATION

Press **MAIN** to scroll **DOWN** thru 4 Main Pages.



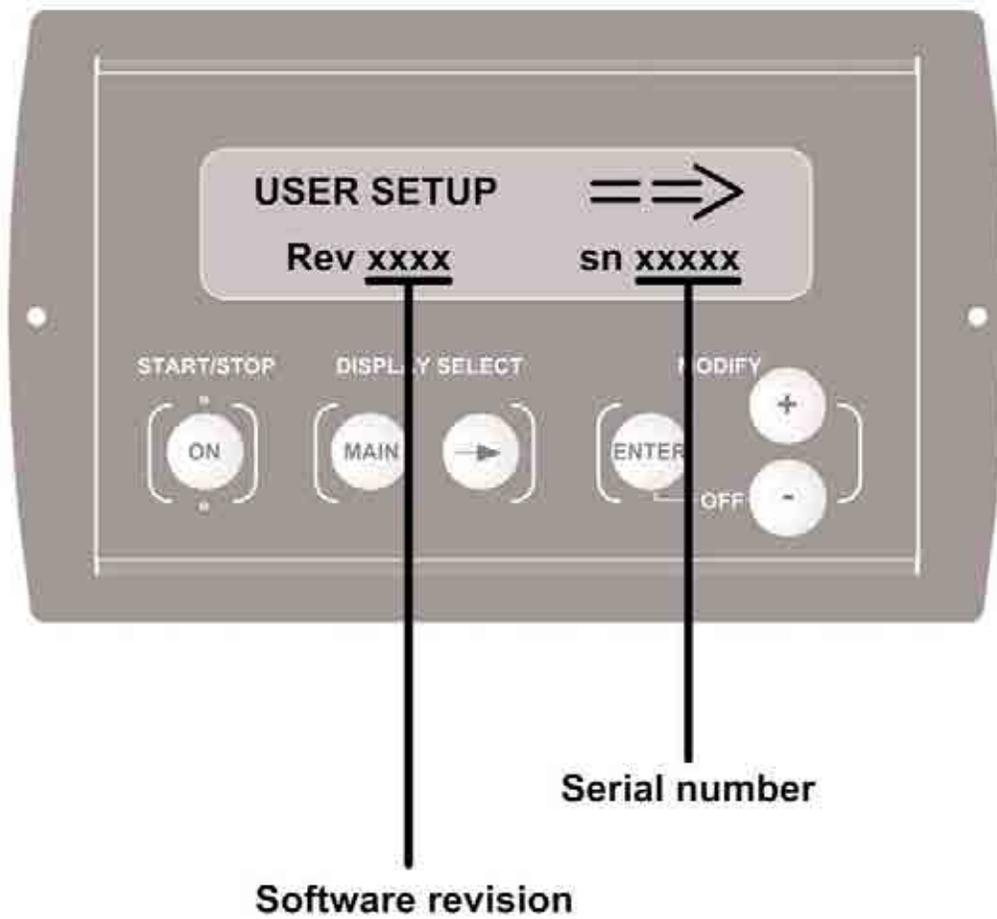
Press **RIGHT** to scroll **SIDWAYS**.



# USER MAIN MENU

## Serial Number and Software Revision Information

Press  to enter USER SETUP menu.



# DIAGNOSTICS: MAIN MENU

**Satellite Numbers**

First digit = selected satellite

Second digit = found satellite  
(If 0, present satellite is unknown.)

Example: B 54 = Selected satellite is 119,  
currently on 110.

**Signal Strength**

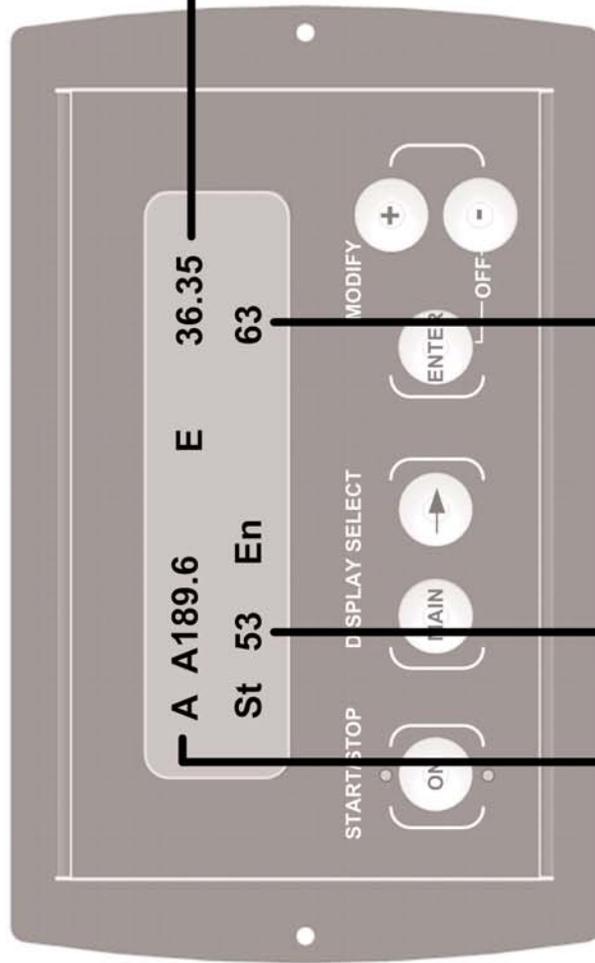
Near 80 for normal lock.  
Much lower if not on a satellite.

**System State, present system activity**

Examples: 0 idle  
1-30 align  
36-38 wide scan  
51-55 active tracking

Various other states will appear momentarily.

# DIAGNOSTICS A: AXIS ANGLES



**Elevation Angle**

Should always be valid.

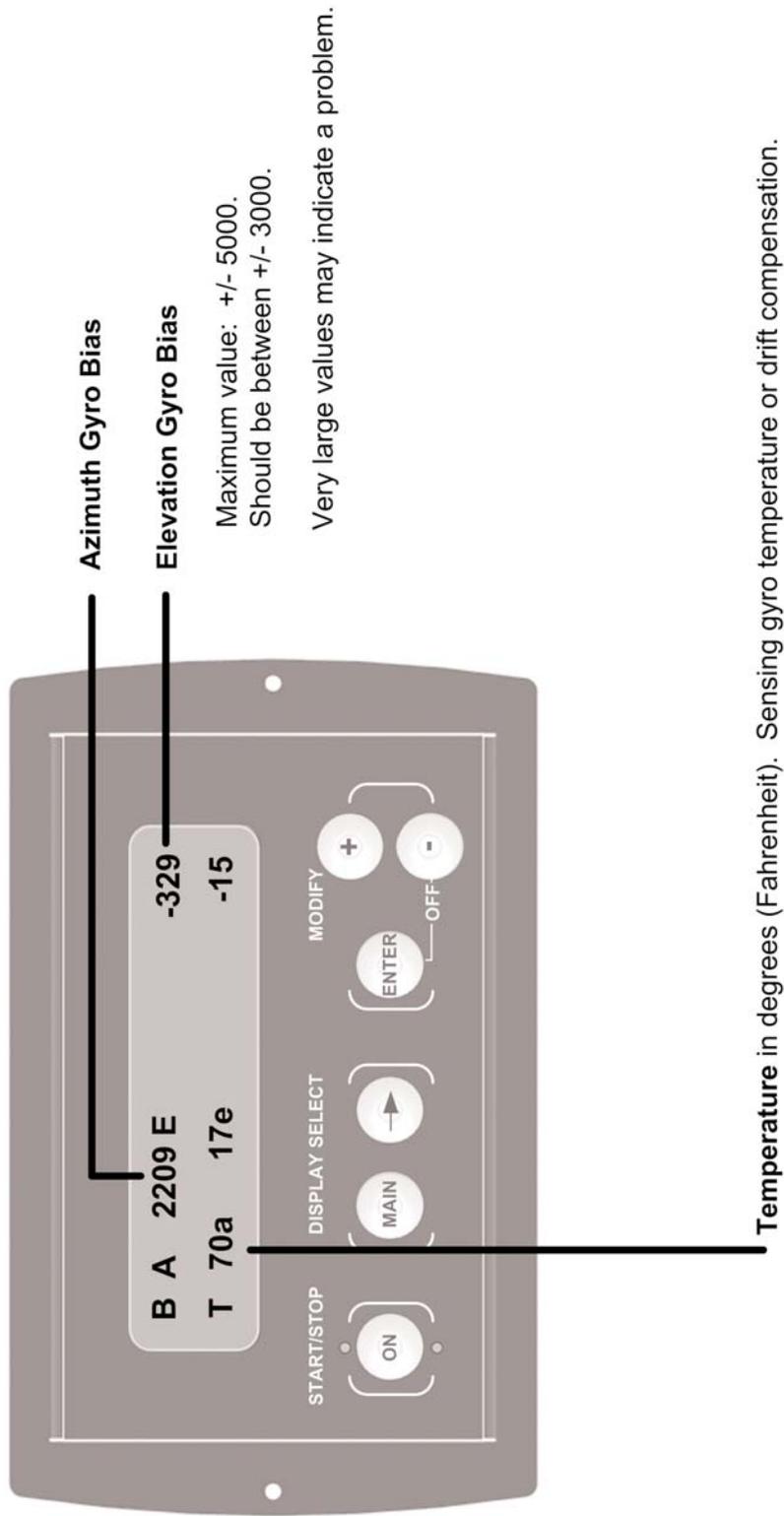
Counts from 0-63. Should reset after one complete 360° rotation.

Same as Page 1, Main Menu.

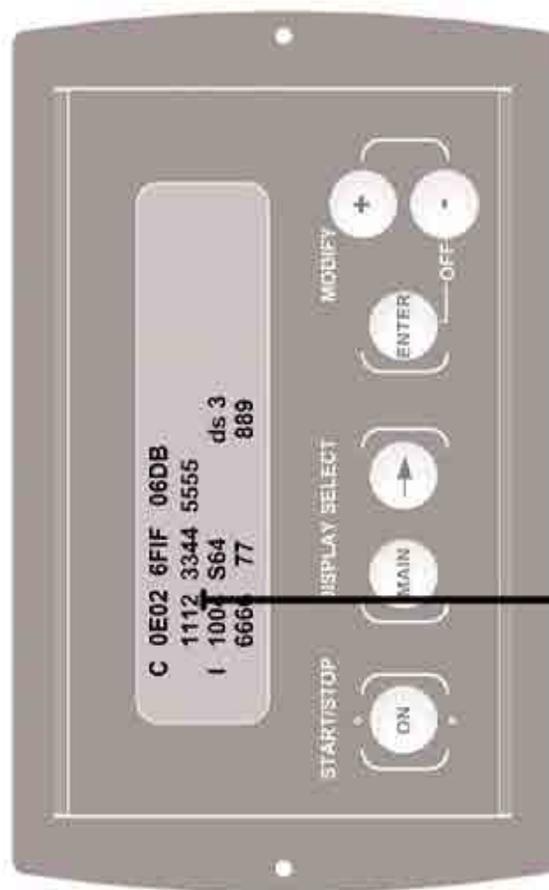
**Azimuth Angle (approximate)**

May not be valid if not tracking or scanning.

# DIAGNOSTICS B: BIAS FOR GYROS



# DIAGNOSTICS C: TUNER DATA

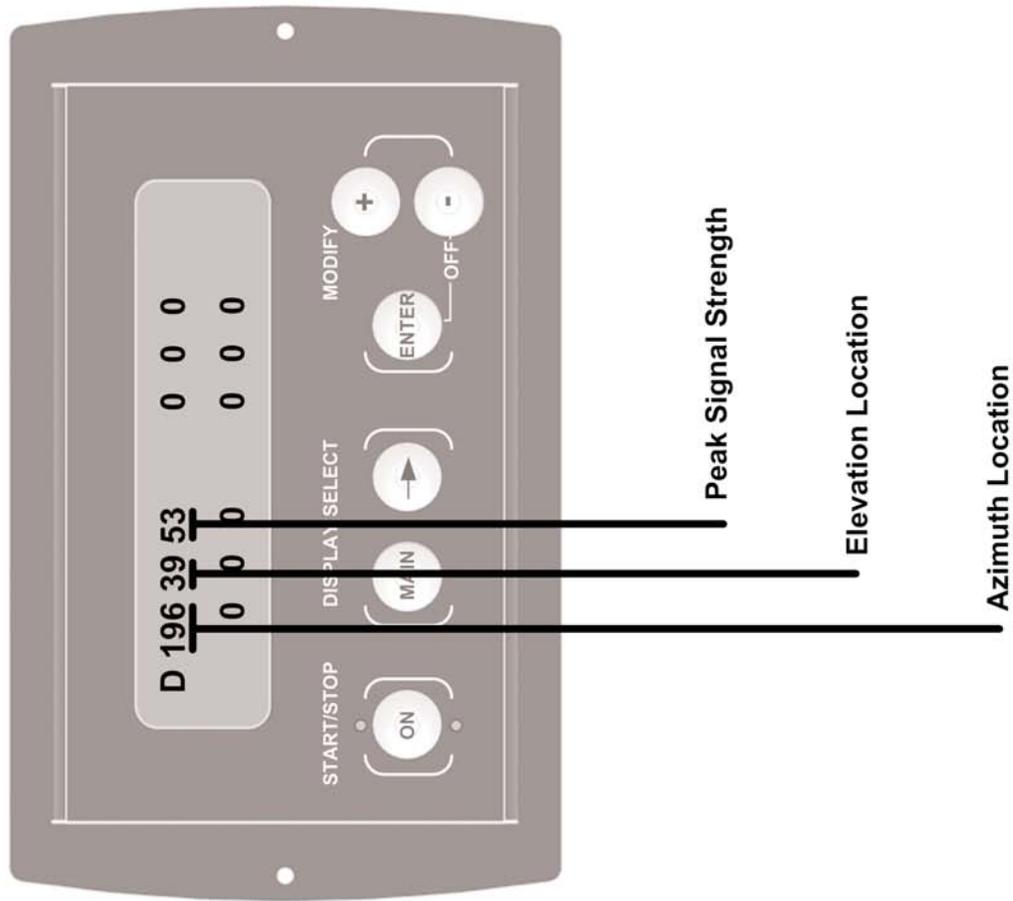


## DIRECTV ONLY

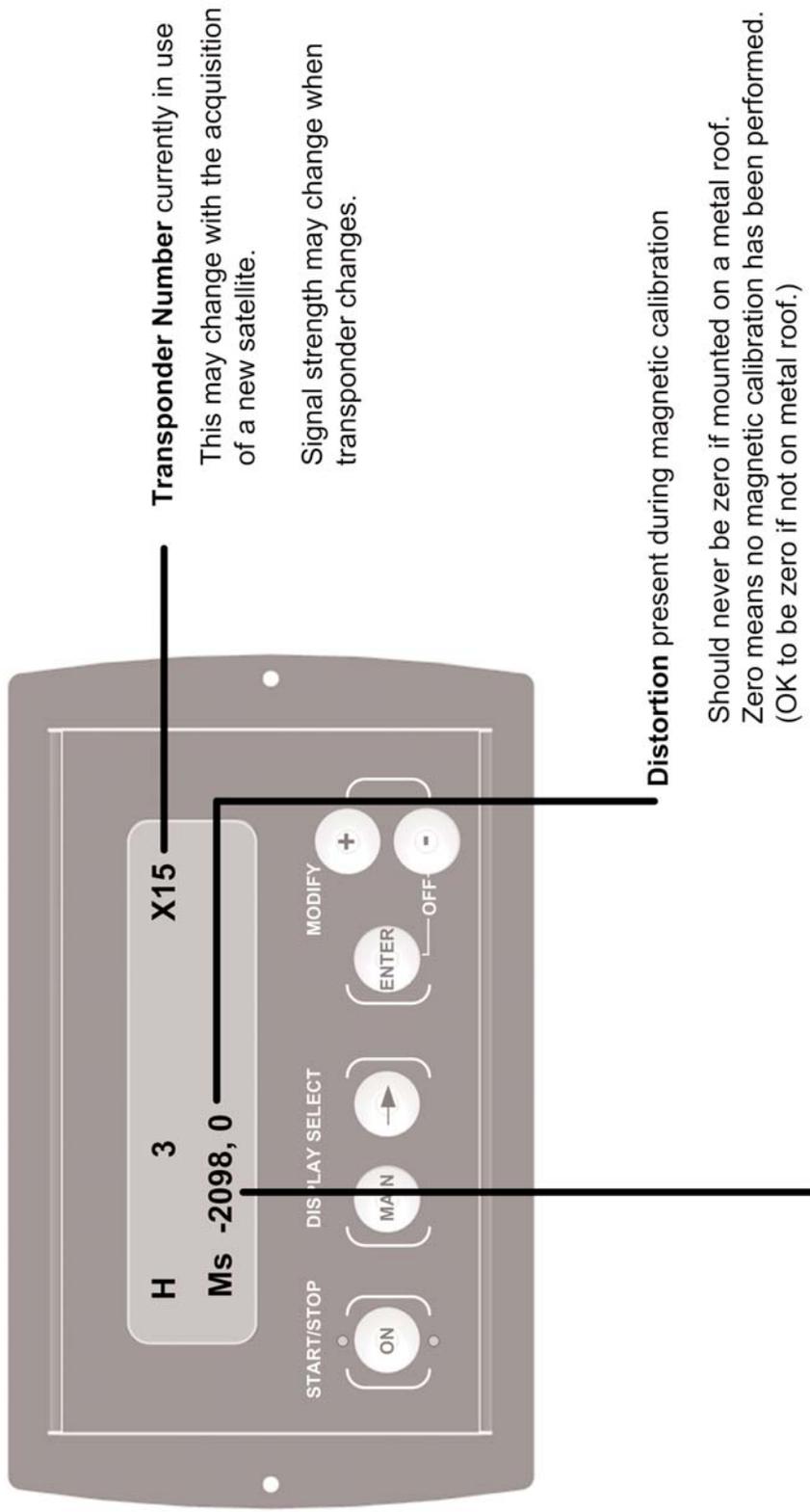
- IRD LNB Status
- 0: 18V no tone
  - 2: 13V no tone
  - 4: 18V with tone
  - 6: 13V with tone

# DIAGNOSTICS D: WIDE SCAN HITS

These numbers are valid after a wide scan and show locations of peak signal strengths. Up to 4 locations can be shown.



# DIAGNOSTICS H: MAGNETIC SENSOR



## Magnetic Sensor Reading

Usually fluctuates between -1600 and -2400 in a 360° rotation.

Note: If Ms reading does not fluctuate at all (0, 99) compass is unplugged.

## NOTES:



# WARRANTY CONSIDERATION FORM

Service Center Name	Customer Name *
Address	King-Dome Serial Number * / Model Series /
	Date of Original Purchase or Installation *
Phone No.	Make, Model and Year of Vehicle
Name and Title of person working on King-Dome	Customer I. D. Number

**Service Order Number \***  
(RMA Number)

--	--	--	--	--	--

**\* REQUIRED**

Repair Date(s)	Total Labor Time (Hours) _____ @ Hourly Rate of _____	Return Shipping Charges (Ground Only)
----------------	--	--

Description of Failure and Work Performed \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**The following paperwork must be sent to King Controls for warranty reimbursement consideration:**

- 1) Warranty Consideration Form with Service Order Number
- 2) Copy of Work Order
- 3) Proof of Purchase (Sales receipt or verification of in-service date)

Note: If returning defective part, please include with paperwork. Warranty Labor Claim will not be processed until part is returned.







11200 Hampshire Avenue South, Bloomington, MN 55438-2453  
Phone: (800) 982-9920 Fax: (952) 922-8424

[www.kingcontrols.com](http://www.kingcontrols.com)