



Trouble Shooting Guide



Satellite Solutions for Mobile Markets

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IMPORTANT!

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

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

Welcome to King Controls.

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 Service Order Number and then clearly define the proper course of action to follow. The King-Dome technician will create a call log to aid in properly documenting the warranty claim.

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

Every King Controls Satellite System is covered by a **TWO YEAR PARTS AND ONE YEAR LABOR** limited warranty from the date of original purchase.

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 (1-800-982-9920).
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

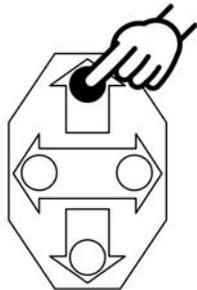
- 1) Technician must have the proper King-Dome Diagnostic Tool.
- 2) For units in service longer than one year, the customer is responsible for labor time.
- 3) Installation parts (coax, power and data cables, etc.) are not covered.
- 4) Replacement parts (including domes) are sent directly from King Controls. **DO NOT USE NEW PRODUCT FOR WARRANTY REPLACEMENT WITHOUT WRITTEN AUTHORIZATION FROM KING CONTROLS.**
- 5) 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.
- 6) 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.
- 7) King Controls shall reimburse the servicing dealer for warranty work at their published labor rates.
- 8) Enclose paperwork with defective part. Clearly mark the Service Order Number on outside of box.

Note: For more detailed installation information, please refer to the 9630 & 9630-LP Installation and Operating Instructions Manual in Section 7 of the Service Manual.

BASIC OPERATION

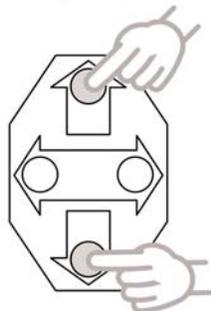
1. Turn TV and satellite receiver on.
2. Go to the signal meter screen on TV.
Choose transponder number:

Dish Network	#11
DIRECTV	#02
3. Enter local zip code on signal meter screen to determine satellite elevation. If you do not know your local zip code, determine your elevation from the maps on pages 16-17.



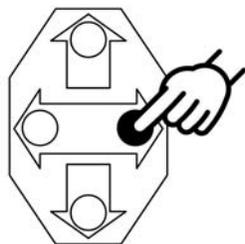
4. Press **UP** arrow on King-Dome Controller to turn King-Dome on.

Note: The King-Dome Controller will count down from 99 to 00 and then display **OH**.

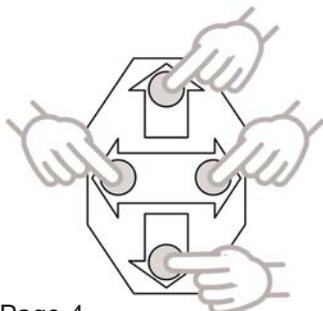


5. Press **UP** or **DOWN** arrow on King-Dome Controller to display dish elevation and match to elevation on TV signal meter screen or elevation from maps on pages 16-17.

IMPORTANT! During Step 6, continuously monitor TV signal meter screen until signal appears on TV.



6. Press and hold **RIGHT** arrow until King-Dome Controller begins flashing "77." Dish will automatically perform a 360 degree scan for satellite. When signal strength appears on TV, momentarily press **ANY BUTTON** to stop the dish from rotating.

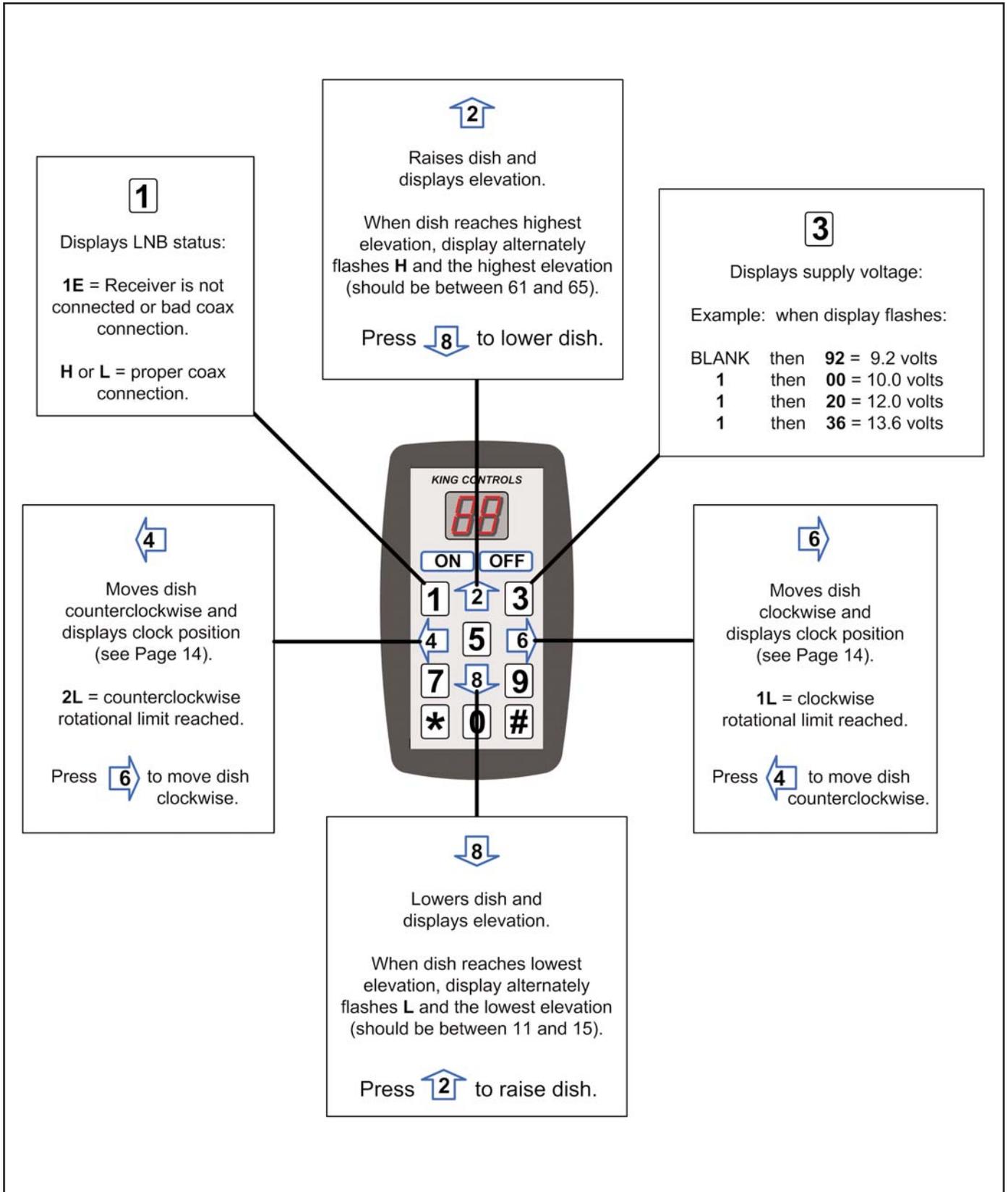


7. Press the **UP, DOWN, LEFT** or **RIGHT** arrows to fine tune signal strength to the highest possible number on TV signal meter screen. Enjoy your programming!

Controller automatically shuts off after 2 minutes.

KEYPAD FUNCTIONS WITH THE 9630 & 9630-LP

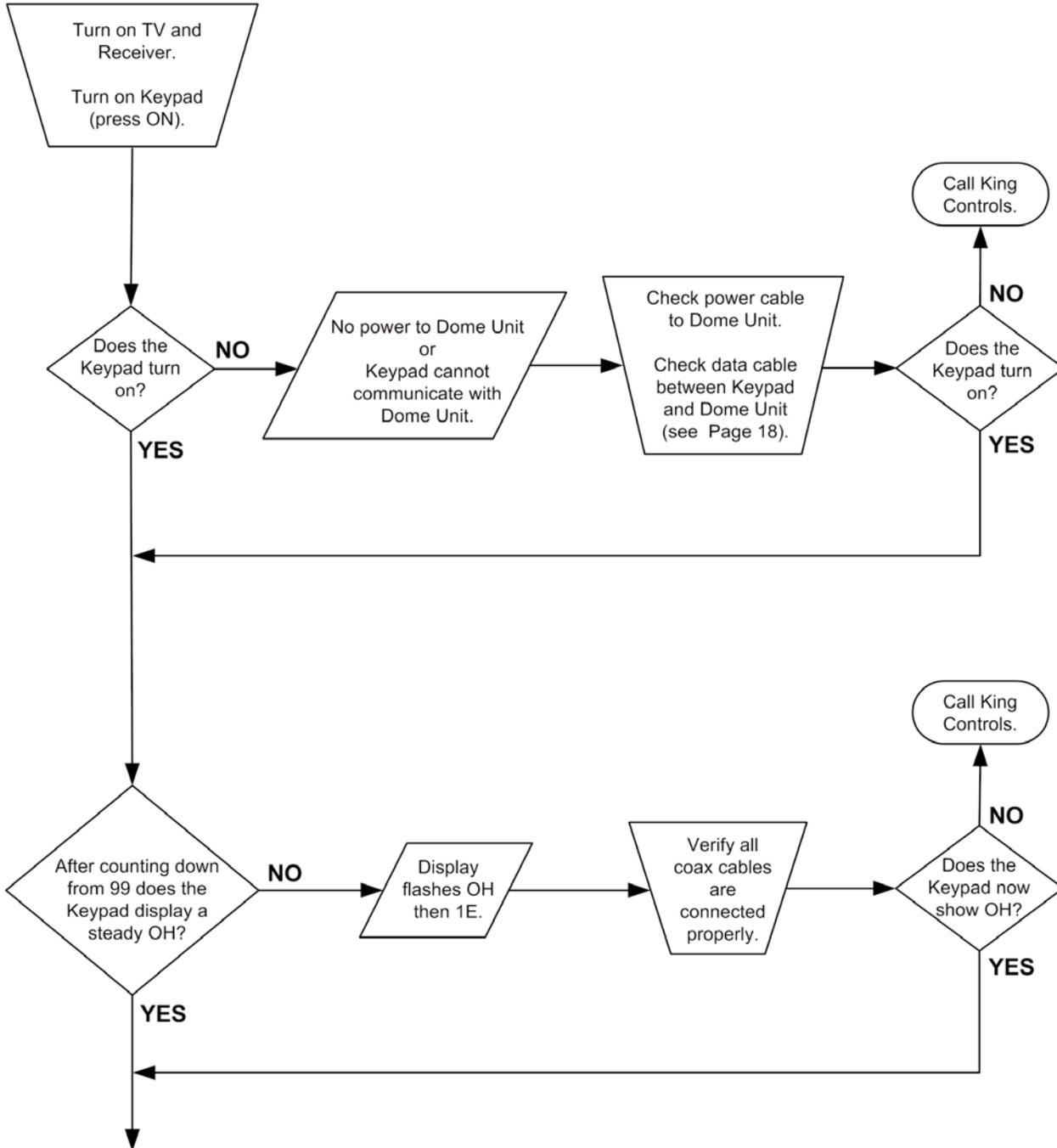
To use the Keypad with the 9630 & 9630-LP AutoScan, simply unplug the existing controller and plug in the Keypad.



9630 & 9630-LP KEYPAD TROUBLESHOOTING

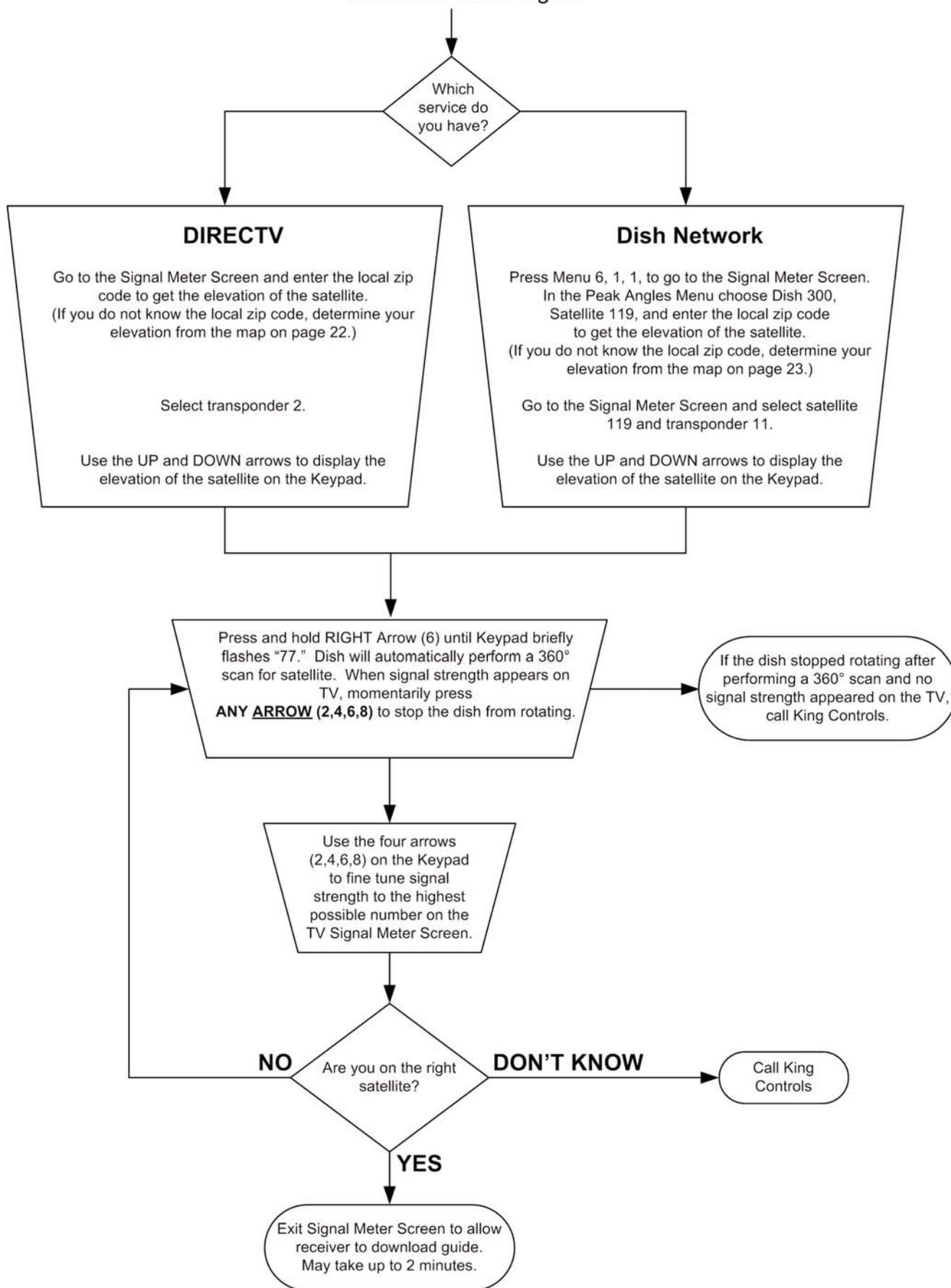
IMPORTANT!

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



Continued on Page 7

Continued from Page 6



Note: For more detailed installation information, please refer to the 9702 & 9702-LP Installation and Operating Instructions Manual in Section 7 of the Service Manual.

BASIC OPERATION

1. Turn on TV and Receiver. "Searching for Satellite" or similar will appear on TV screen.

2. On King-Dome Controller, press and hold ON/SEARCH for **4 SECONDS**. Power light turns steady GREEN.

Hand Held Controller

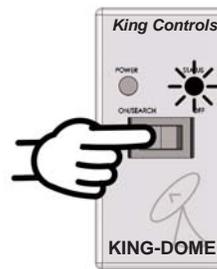
Wall Mount Controller

STATUS LIGHT

- flashes a variety of colors for about one minute
- blinks RED
- blinks GREEN (may start blinking RED again)
- turns steady Green

SYSTEM STATUS

- unit performs self-diagnostic
- search in progress
- potential satellite found
- satellite found

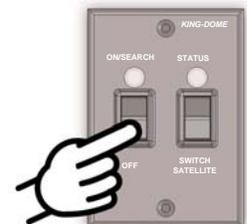


3. Can you view your desired programming?

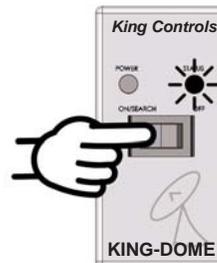
Note: Receiver may require 2 minutes to download program information.

YES: Turn King-Dome off and enjoy.

IMPORTANT! Do not turn off the Controller until you have found your desired satellite and programming.

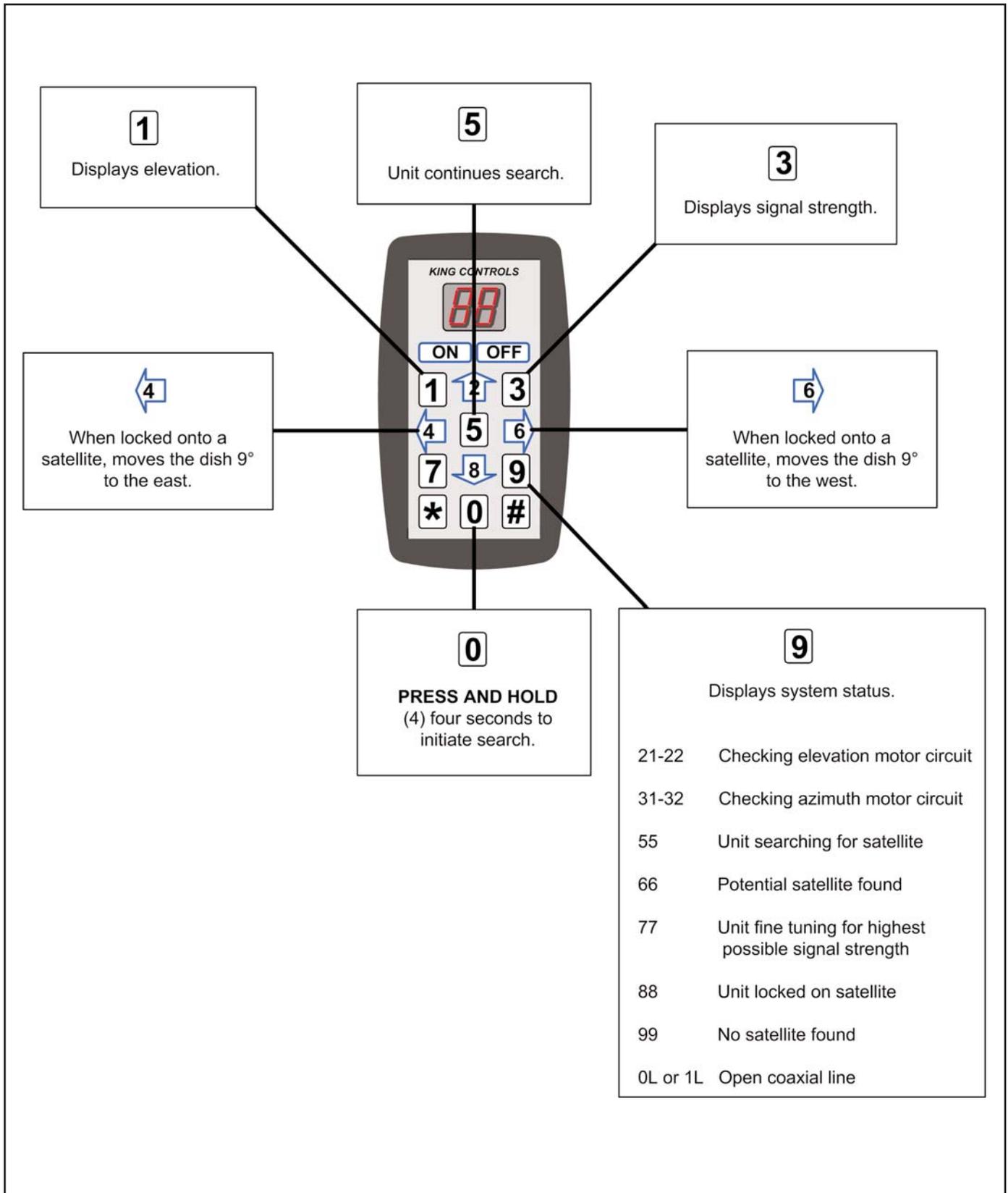


NO: Press the ON/SEARCH button for one second to continue search. Wait until status light turns steady green and go to Step 3.



KEYPAD FUNCTIONS WITH THE 9702 & 9702-LP

To use the Keypad with the 9702 & 9702-LP Automatic, simply unplug the existing controller and plug in the Keypad.



9	
Displays system status.	
21-22	Checking elevation motor circuit
31-32	Checking azimuth motor circuit
55	Unit searching for satellite
66	Potential satellite found
77	Unit fine tuning for highest possible signal strength
88	Unit locked on satellite
99	No satellite found
0L or 1L	Open coaxial line

DISPLAY CODES

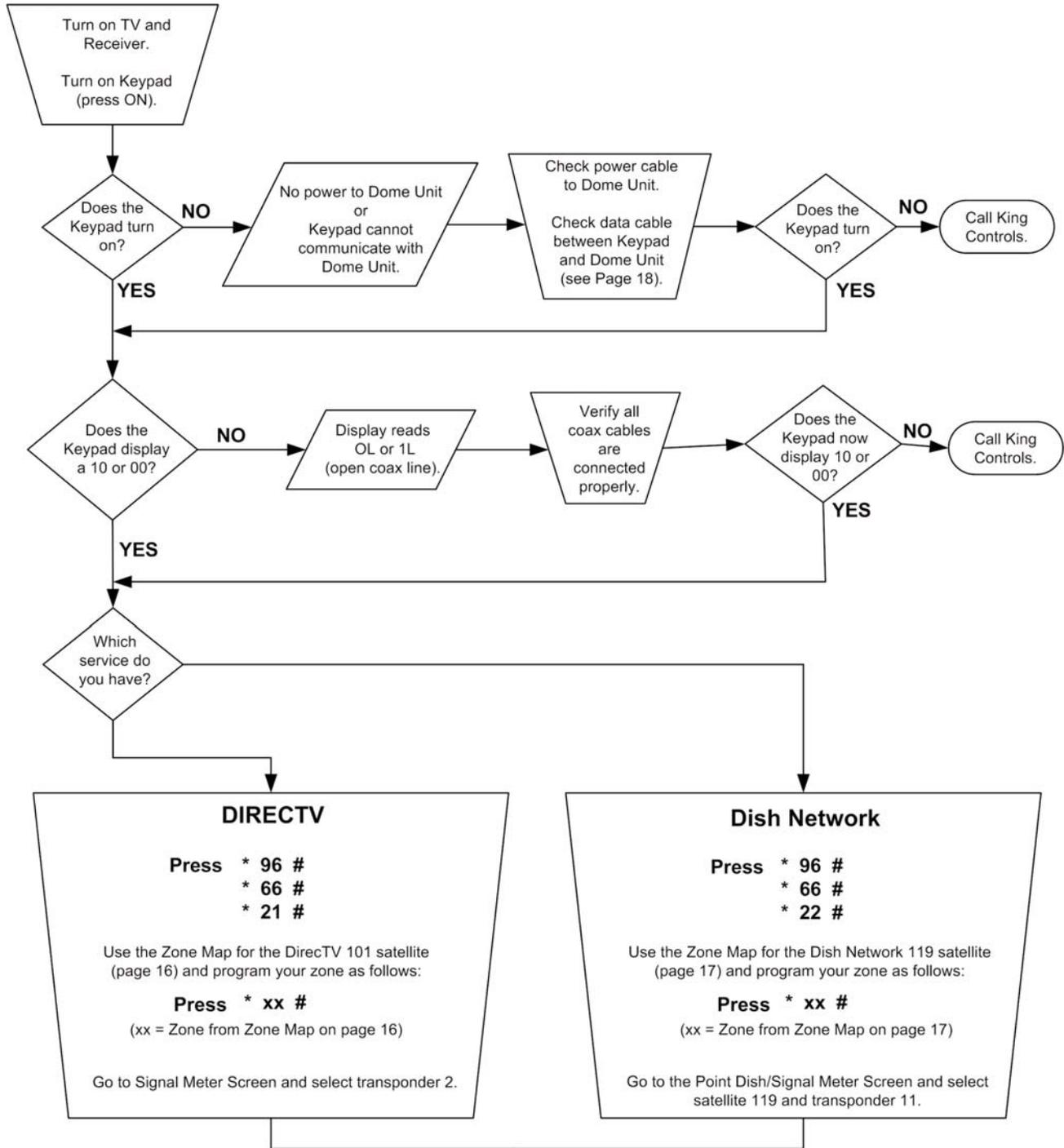
ENTER CODE	INFORMATION DISPLAYED
* 61 #	Signal gain programmed into unit (0-80)
* 80 #	Elevation zone (1-15)
* 81 #	Satellite provider 21 = DIRECTV 22 = Dish Network
* 82 #	Mode 45 = automatic 55 = manual
* 98 #	Software revision

PROGRAMMING CODES

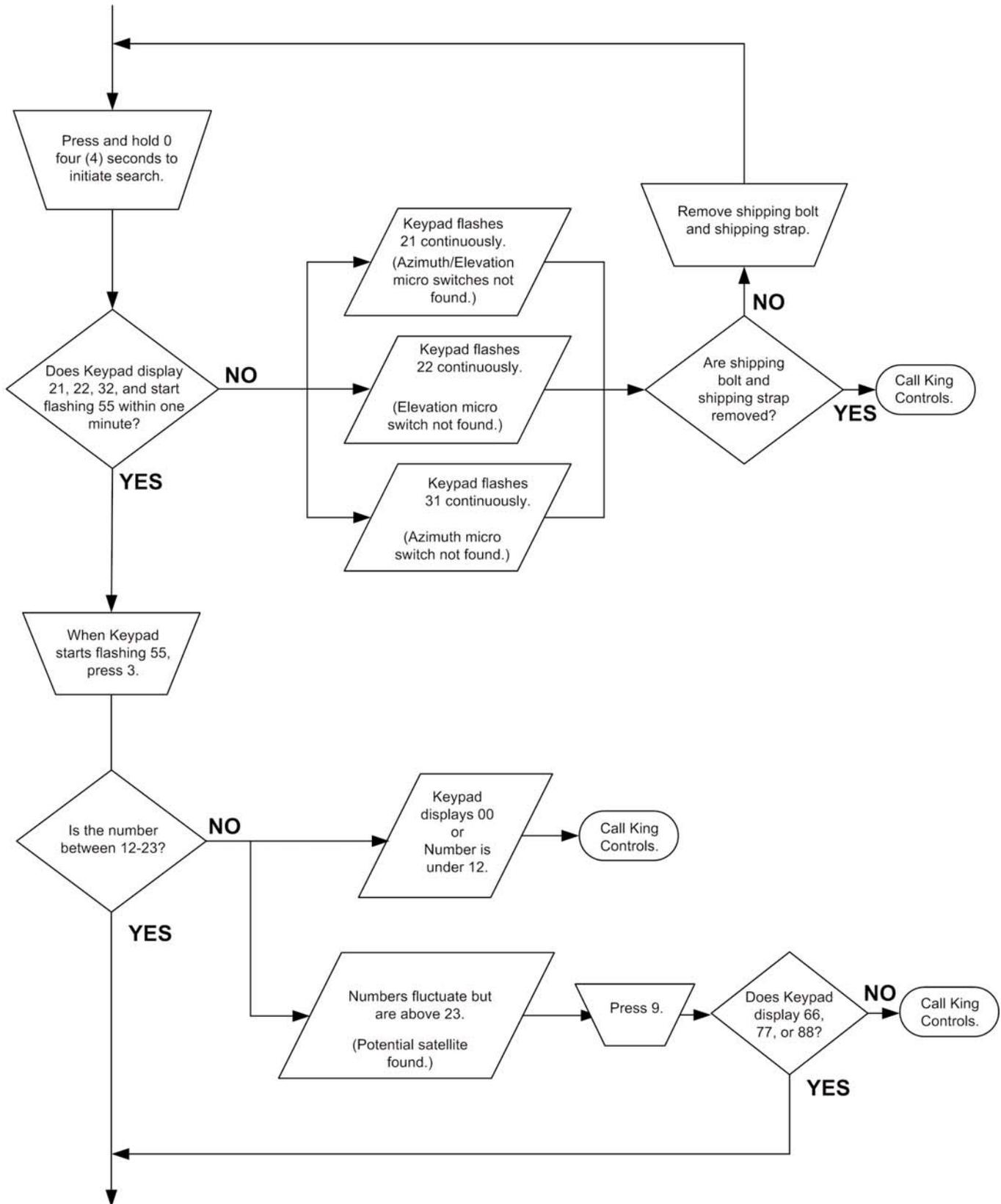
ENTER CODE	PROGRAMMING
* 01 # thru * 15 #	Programs Elevation zone (see maps pages 16-17).
* 96 # * 66 # * 21 #	Programs unit for DIRECTV.
* 96 # * 66 # * 22 #	Programs unit for Dish Network.

9702 & 9702-LP KEYPAD TROUBLESHOOTING

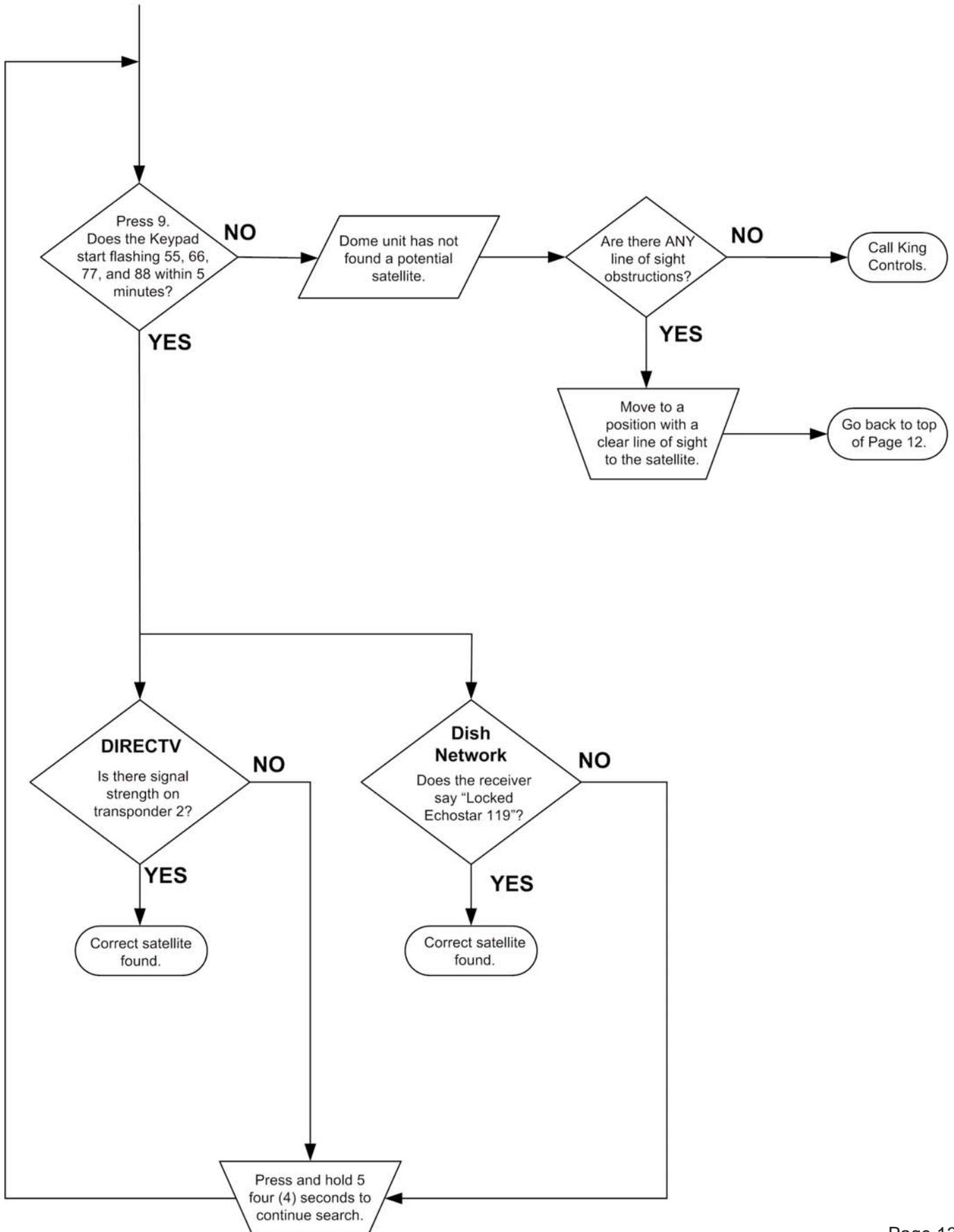
IMPORTANT!
Before performing any warranty work, you must call King Controls for a Service Order Number.



Continued on Page 12.



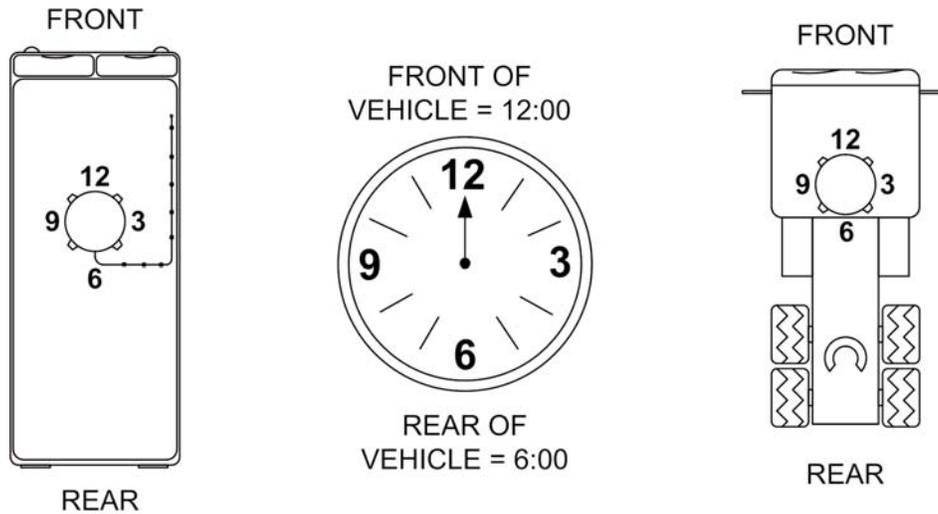
Continued from Page 12



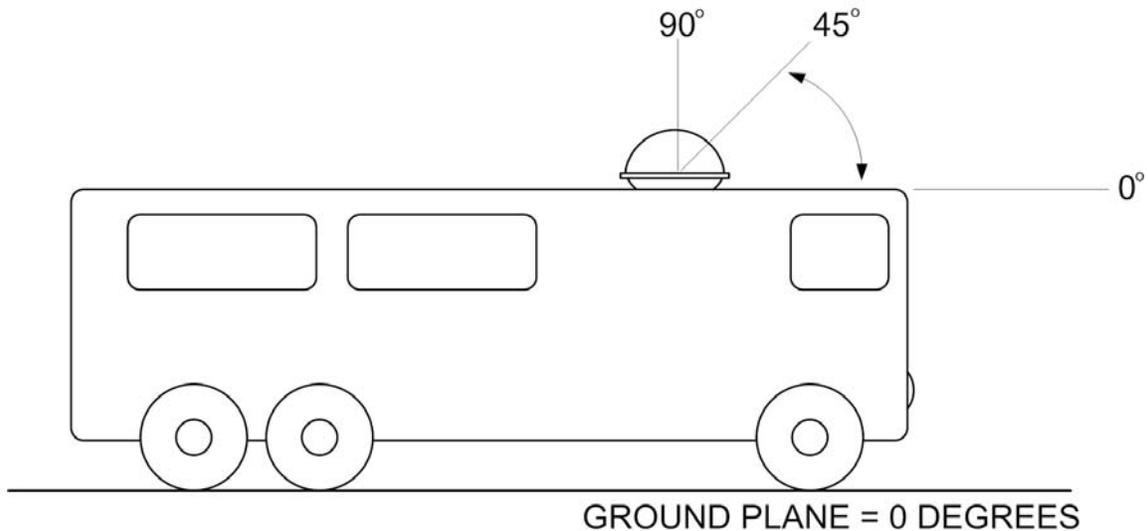
SECTION 5 **REFERENCE:**
9630, 9630-LP & 9702, 9702-LP

DEFINITION OF TERMS

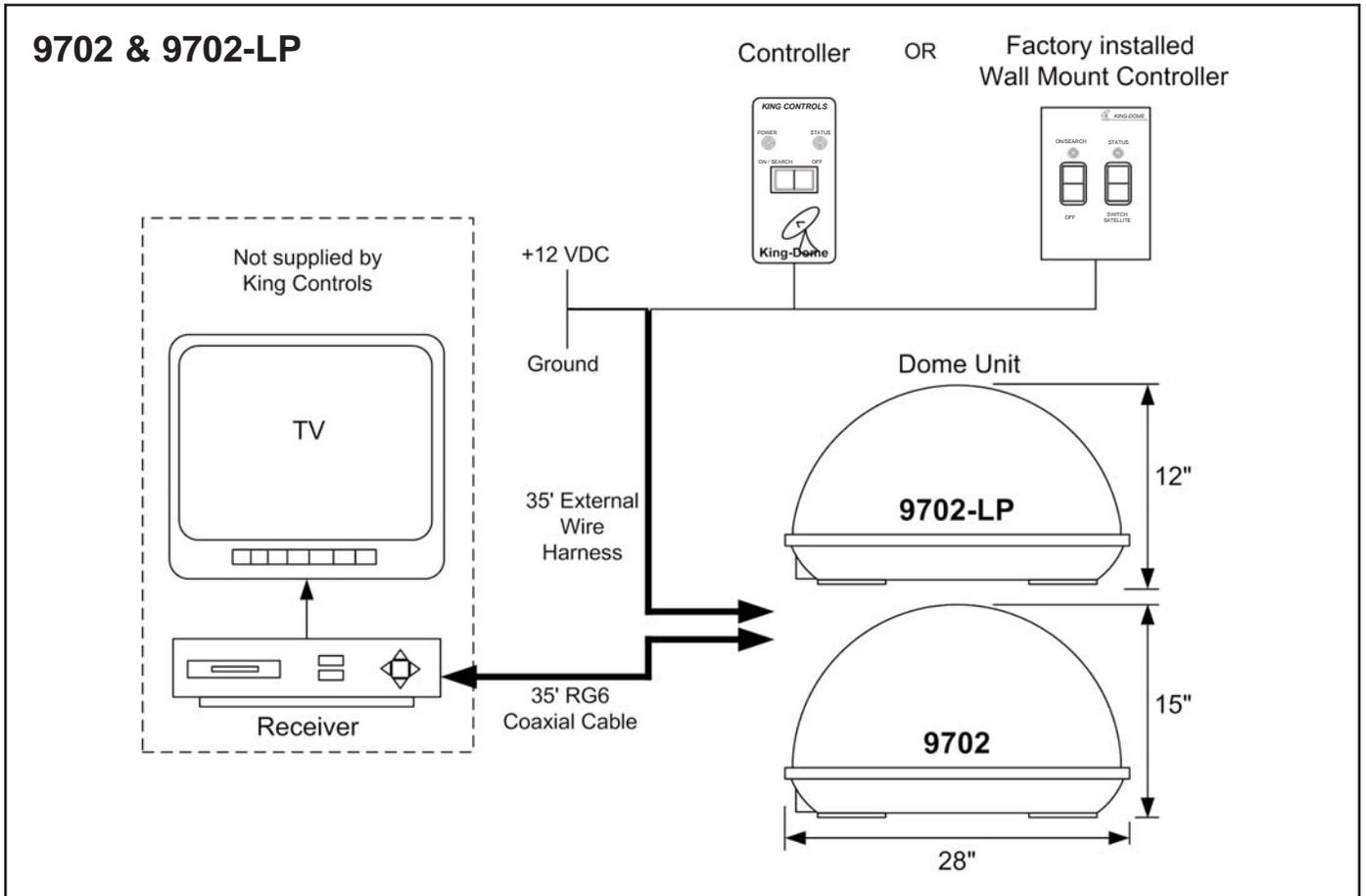
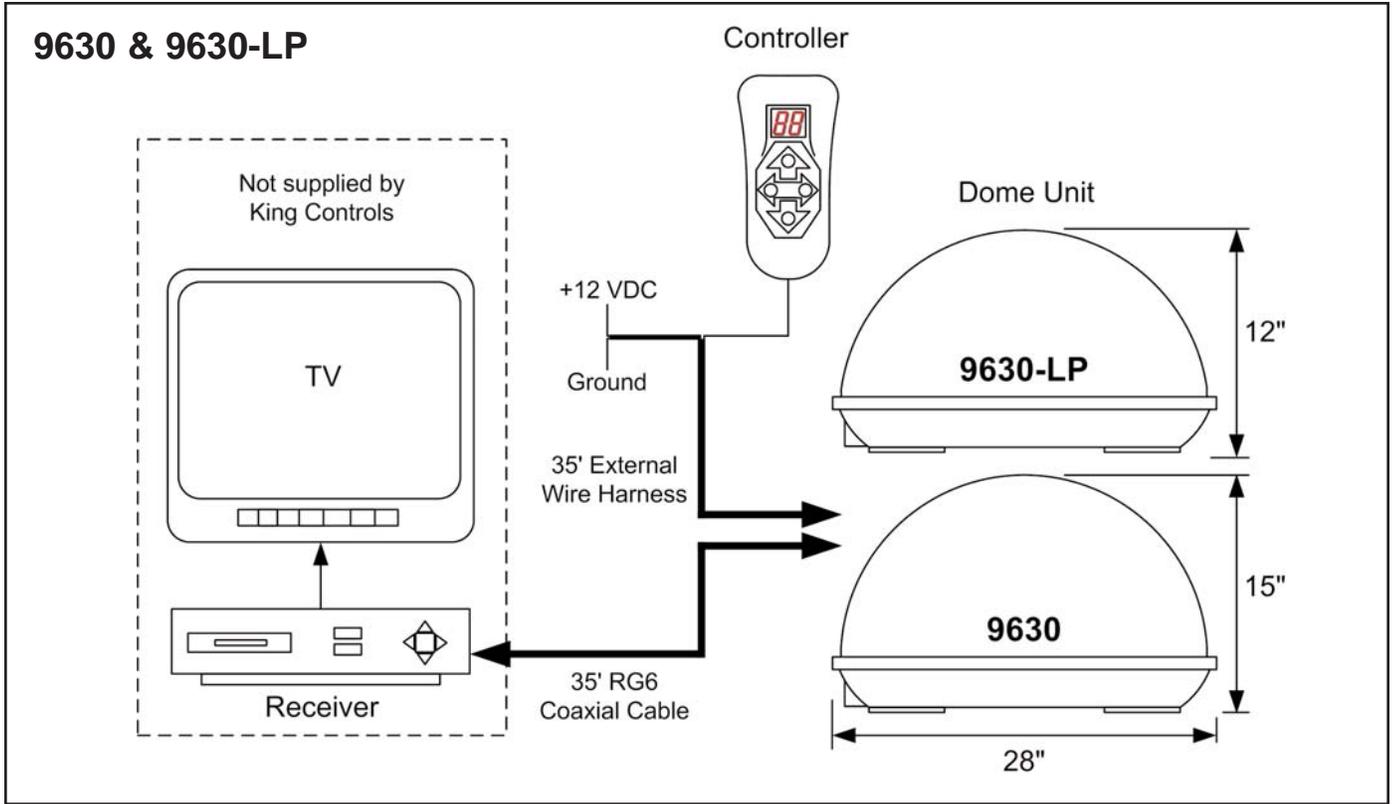
AZIMUTH: Circular rotation around the vehicle.
Like a clock face: front of vehicle is 12:00, rear is 6:00.



ELEVATION: Angle in degrees measured from the ground plane.

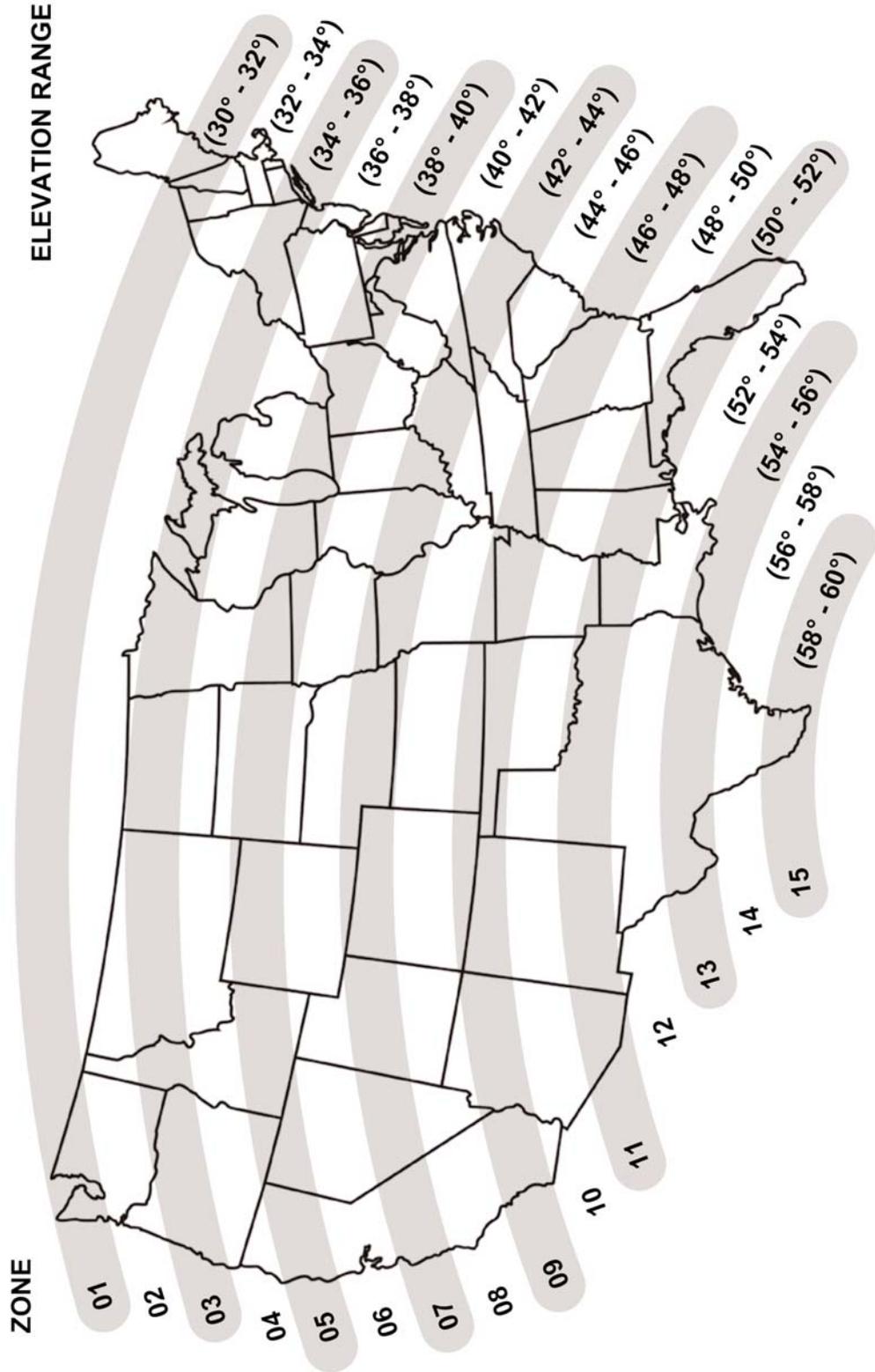


WIRING SCHEMATICS

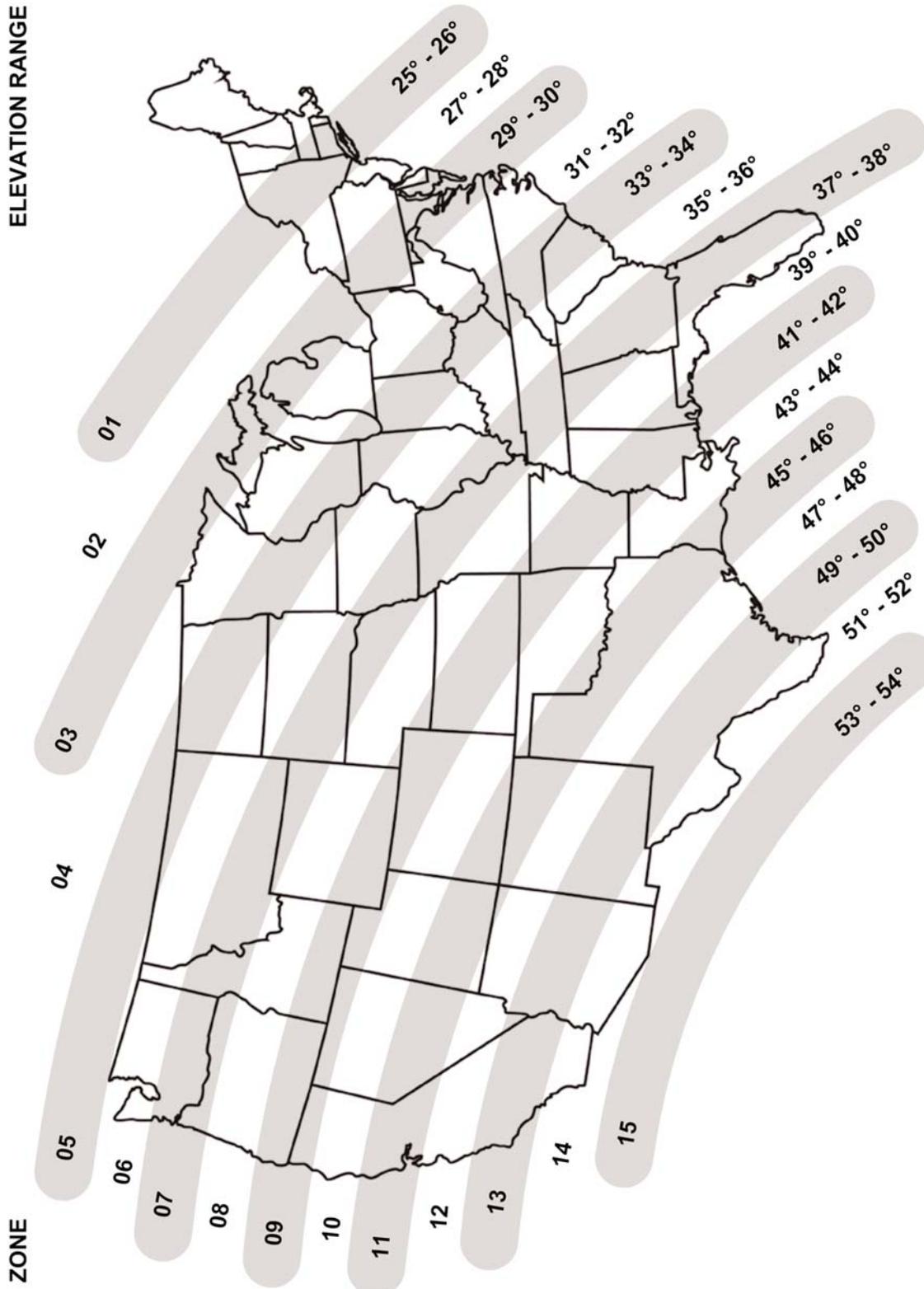


ZONE AND ELEVATION MAPS

DIRECTV 101



DISH NETWORK 119



DIRECT TO CIRCUIT BOARD CABLE

IMPORTANT! Only the Direct to Circuit Board Cable will work for this procedure. A standard phone cord WILL NOT WORK.

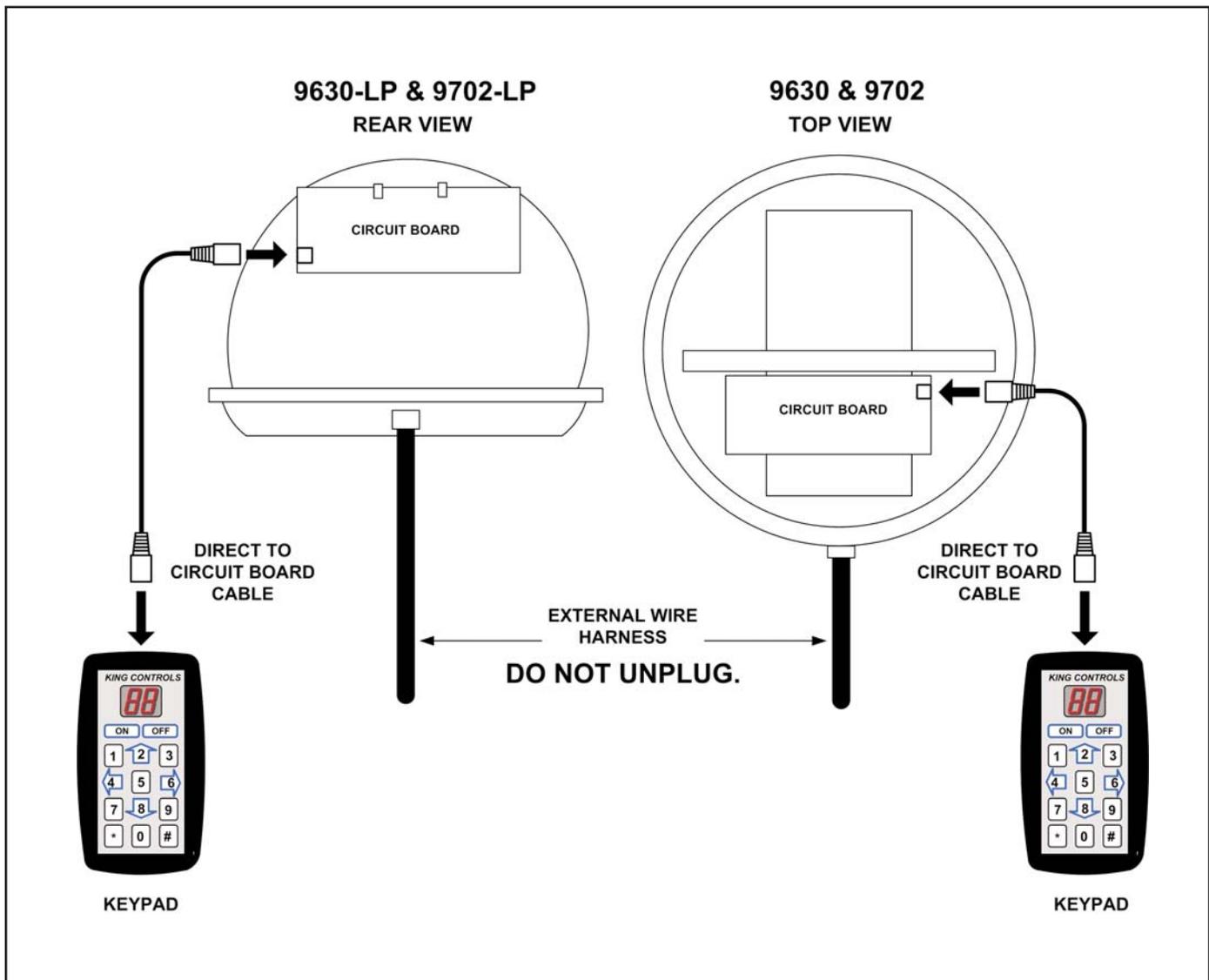
Call King Controls before performing this procedure.

Note: Warranty does not cover external wiring.

The Direct to Circuit Board Cable (supplied with Service Manual) is used to verify that the data cable in the external wire harness is good.

Leave the external wire harness connected to the back of the dome unit.

Connect the Direct to Circuit Board Cable between the Keypad and the circuit board and press ON. The Keypad should turn on.



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Note: For more detailed installation information, please refer to the 9760/62 & 9760/62-LP Installation and Operating Instructions manual in Section 7 of the Service Manual.

BASIC 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.

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

2. Press **ON**



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

**POWER UP
PLEASE WAIT**

**LOADING
PLEASE WAIT**

Unit begins searching for the selected satellite.

**RUN: SCAN ALIGN
NOW on? ==>**

**RUN: SCAN ALIGN
2-NORTH CENTRAL**

**RUN: SCAN ALIGN
DTV 101**

Unit has locked onto the selected satellite.

**RUN: LOCKED S XX
NOW on 101 ==>**

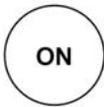
**RUN: LOCKED S XX
DTV 101**

**RUN: LOCKED S XX
2-NORTH CENTRAL**

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.**

SET REGION

Note: Setting the current region reduces satellite acquisition time.

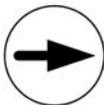
1. Press  Unit goes into IDLE/HOLD mode.

IDLE/HOLD SXX
NOW on 101 ==>

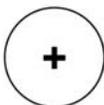
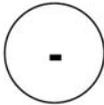


2. Press  Unit goes into USER SETUP menu.

USER SETUP ==>
Rev xxxx sn xxxxx

3. Press  Unit goes into SET REGION menu.

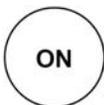
SET REGION
■■■■■■■■

4. Press  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.
or 

Display your region on the controller.

5. Press  Sets REGION into memory.

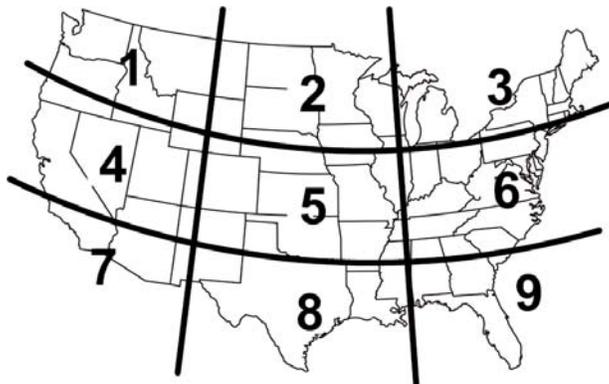
IDLE/HOLD SXX
NOW on 101 ==>

6. Press  Unit searches based on new REGION.

RUN: SCAN ALIGN
DTV 101

REGION OPTIONS:

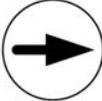
- 1 NORTH WEST
- 2 NORTH CENTRAL
- 3 NORTH EAST
- 4 CENTRAL WEST
- 5 MIDDLE CENTRAL
- 6 CENTRAL EAST
- 7 SOUTH WEST
- 8 SOUTH CENTRAL
- 9 SOUTH EAST
- 0 ALL REGIONS
- 0 RECALIBRATE



SET SATELLITE SERVICE

SATELLITE OPTIONS	
DTV 101	DIRECTV at 101 West Longitude
DTV 119	DIRECTV at 119
DTV 101/119	DIRECTV at 101 and 119
DISH 110	Dish Network at 110
Dish 119	Dish Network at 119
Dish 148	Dish Network at 148
EXPVU 82	Bell ExpressVu at 82
EXPVU 91	Bell ExpressVu at 91

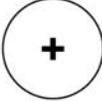
Note: Future locations can be added.

1. Press 

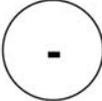
Unit goes into SET SATELLITE menu.

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

Note: **For DIRECTV Subscribers:** The satellite setting allows the user to select the satellite and service provider of choice. For **DIRECTV** subscribers, the Trac-King can also track a secondary or alternate satellite.

Example: If you are a subscriber to the **DIRECTV** service most of the programming that you will be watching will be transmitted from the satellite located at 101 degrees. You may also subscribe to programming that is transmitted from another satellite located at 119 degrees. In order to receive programming from both satellites you can either select an individual (DTV 101) satellite manually from the display or you can select a multiple (DTV 101/119) satellite setup. The multiple satellite selection will automatically switch between satellites (DTV 101/119) based on the channel or programming that you select on the Satellite Receiver (multi-satellite capable receiver is required). Please keep in mind that the programming may pause (freeze frame) or pixelate while the antenna acquires and locks onto the new satellite.

The multiple satellite setting will work only if your satellite receiver is set up to work in oval dish mode. Consult your satellite receiver manual for instruction.

It is not recommended to use the DTV 101/119 setting unless there is programming on the DTV 119 satellite that you specifically subscribe to.

Note: **For Dish Network Subscribers:** Use the procedure on the previous page to switch between the 110 and 119 satellites.

TROUBLESHOOTING

IMPORTANT!

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

Note: The Keypad is not used with the Trac-King product line. All diagnostics and troubleshooting are performed with the end-user controller.

SYMPTOM	POSSIBLE SOLUTION
Controller does not power up.	<p>Check: tuner is connected to power supply.</p> <p>controller is connected to tuner.</p> <p>power supply is plugged into 110 VAC outlet.</p>
Controller remains in "Power Up, Please Wait" condition.	<p>Disconnect power supply for 15 seconds, then reconnect.</p> <p>Verify voltage on coax at dome unit is 24 volts.</p> <p>Inspect rotary joint cable, then reseal (inside dome unit).</p> <p>Inspect all coax cables and verify connections are snug but not overly tight (inside and outside dome unit).</p>
Controller displays "Load Error."	<p>Disconnect power supply for 15 seconds, then reconnect.</p> <p>Inspect rotary joint cable, then reseal (inside dome unit).</p>
Controller displays "AZ FAULT."	<p>Dish cannot rotate.</p> <p>Verify shipping bolt is removed (bottom of dome unit).</p> <p>Disconnect power supply for 15 seconds, then reconnect.</p> <p>Perform OPTION 21 RE-INITIALIZE and 0-RECALIBRATE (pages 26-27).</p> <p>Reseat ribbon cables (inside dome unit).</p>

SYMPTOM	POSSIBLE SOLUTION
<p>Display reads "EL FAULT."</p>	<p>Make sure shipping tie strap is removed (back left hand side of dome unit).</p> <p>Dish stuck on limit switch.</p> <p>Disconnect power supply for 15 seconds, then reconnect.</p> <p>Restart system. If problem persists, perform OPTION 21 RE-INITIALIZE and 0-RECALIBRATE (pages 26-27).</p> <p>Reseat ribbon cables inside dome unit.</p>
<p>Only getting signal on 1/2 of transponders.</p>	<div data-bbox="613 674 1498 890" style="background-color: #e0e0e0; padding: 10px;"> <p>9762 / 9762-LP and 9762-SW ONLY: Verify De-stacker is installed (see Page 33).</p> <p>IMPORTANT! The De-stacker must be installed even if only one TV and receiver are used.</p> </div> <p>Verify coax cables are tightly crimped with RADIAL (COMPRESSION) style crimps only.</p> <p>Verify receiver is operating properly.</p> <p>Verify LNB type is set correctly.</p>
<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 tightly crimped with RADIAL (COMPRESSION) style crimps only.</p> <p>Perform OPTION 21 RE-INITIALIZE and 0-RECALIBRATE (pages 26-27).</p> <p>Perform Temperature Calibration (page 30).</p> <p>Inspect all coax cables and verify connections are snug but not overly tight (inside and outside dome unit).</p>

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.)

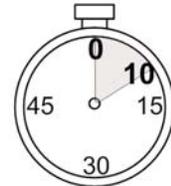
SET OPTION
OPTION 0

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**

**LOADING
PLEASE WAIT**

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

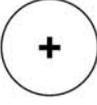
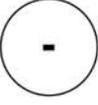
**IDLE/HOLD SXX
NOW on ? ==>**

9. Press  to enter USER SETUP menu.

**USER SETUP ==>
Rev xxxx sn xxxxx**

10. Press  to enter SET REGION menu.

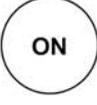
**SET REGION
■■■■■■■■**

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**

MAGNETIC CALIBRATION

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

Note: To check if a Magnetic Calibration has been performed, go to the following diagnostics page:

H 5 X15
Ms, -2234,0

If this number is zero, then a magnetic calibration has not been performed.

1. Press **ON** to enter IDLE/HOLD.



IDLE/HOLD SXX
DTV 101

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

DEALER SETUP ==>
CODE 0

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

DEALER SETUP ==>
CODE 13

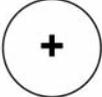
4. Press **→** as needed to display SET TEST-NONE.

SET TEST
NONE

5. Press **+** as needed to display:
Press **ENTER** Display now shows:

SET TEST
MAG CAL

SET TEST cancel
MAG CAL

6. Press  as needed to display:

**SET TEST RUN NOW
MAG CAL**

IMPORTANT! During Step 7, DO NOT MOVE THE VEHICLE.

7. Press  to start calibration.
Unit performs a self-calibration (2-3 minutes).

MAG CAL WAIT

8. Controller will display MAG CAL TURN.

Drive the coach in a 360 degree circle. Drive slower than idle speed and complete the circle in 1-2 minutes.

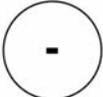
The circle can be any size and does not need to be perfectly round as long as it takes **MORE THAN ONE MINUTE** to complete.

MAG CAL TURN

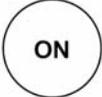
9. Continue turning until the controller displays MAG CAL DONE.

MAG CAL DONE

10. Stop the vehicle.

Press  and  simultaneously to turn off.

off

11. Press  System will now perform a satellite acquisition sequence.

TEMPERATURE CALIBRATION

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

IMPORTANT! Vehicle must be absolutely still when calibrating.

Start the calibration in the morning when the unit is cool. You do not need to monitor unit during this process.

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



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

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

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

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

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

When finished, display shows CALIBRATION COMPLETE.

DEALER SETUP ==>
CODE 0

DEALER SETUP ==>
CODE 13

SET TEST
NONE

TEMP CAL

SET TEST cancel
TEMP CAL

SET TEST RUN NOW
TEMP CAL

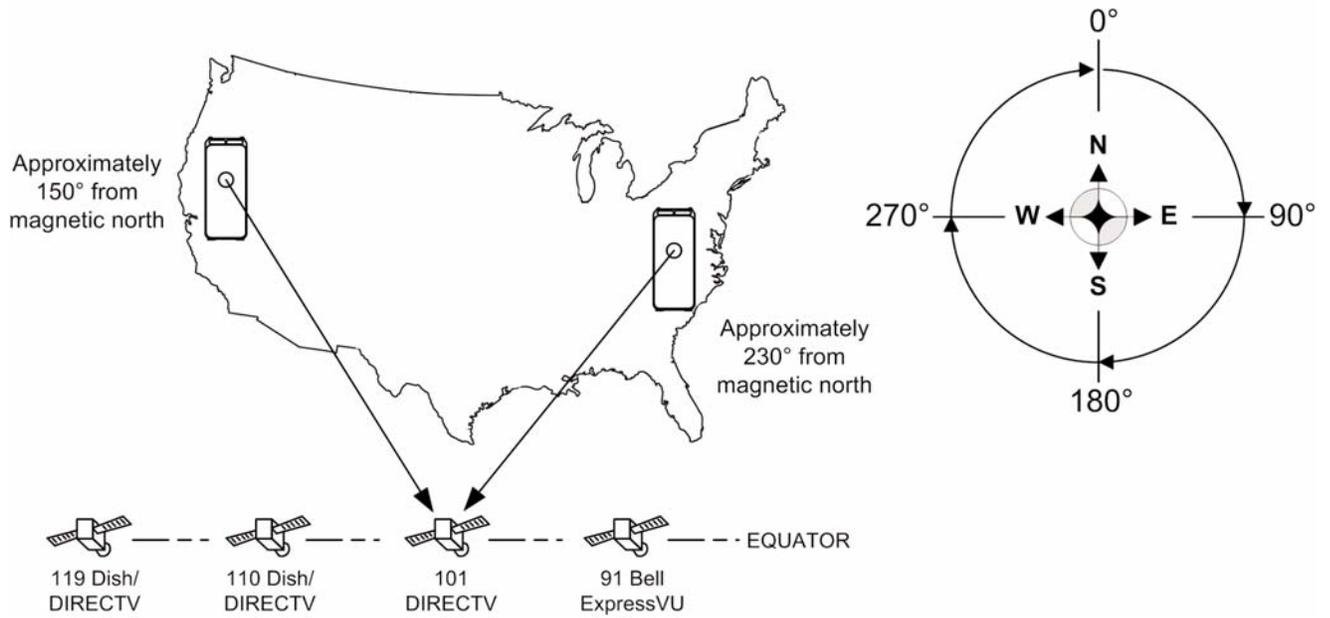
TEMPERATURE CAL
ST. XX

CALIBRATION COMPLETE

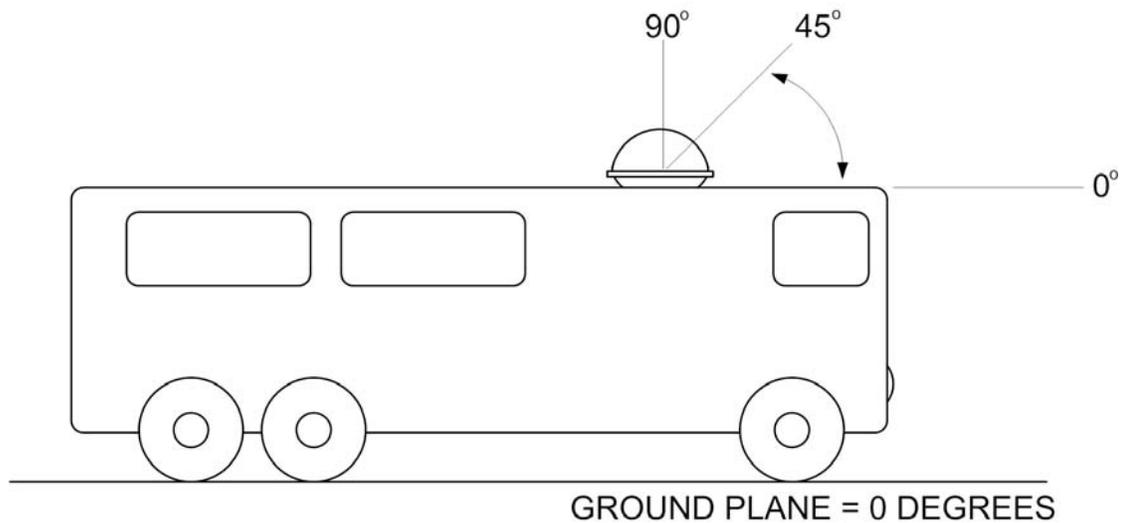
7. Disconnect power supply (110 VAC) for at least one hour to allow unit to cool internally.

DEFINITION OF TERMS

AZIMUTH: Angle in degrees measured clockwise from Magnetic North (0°).

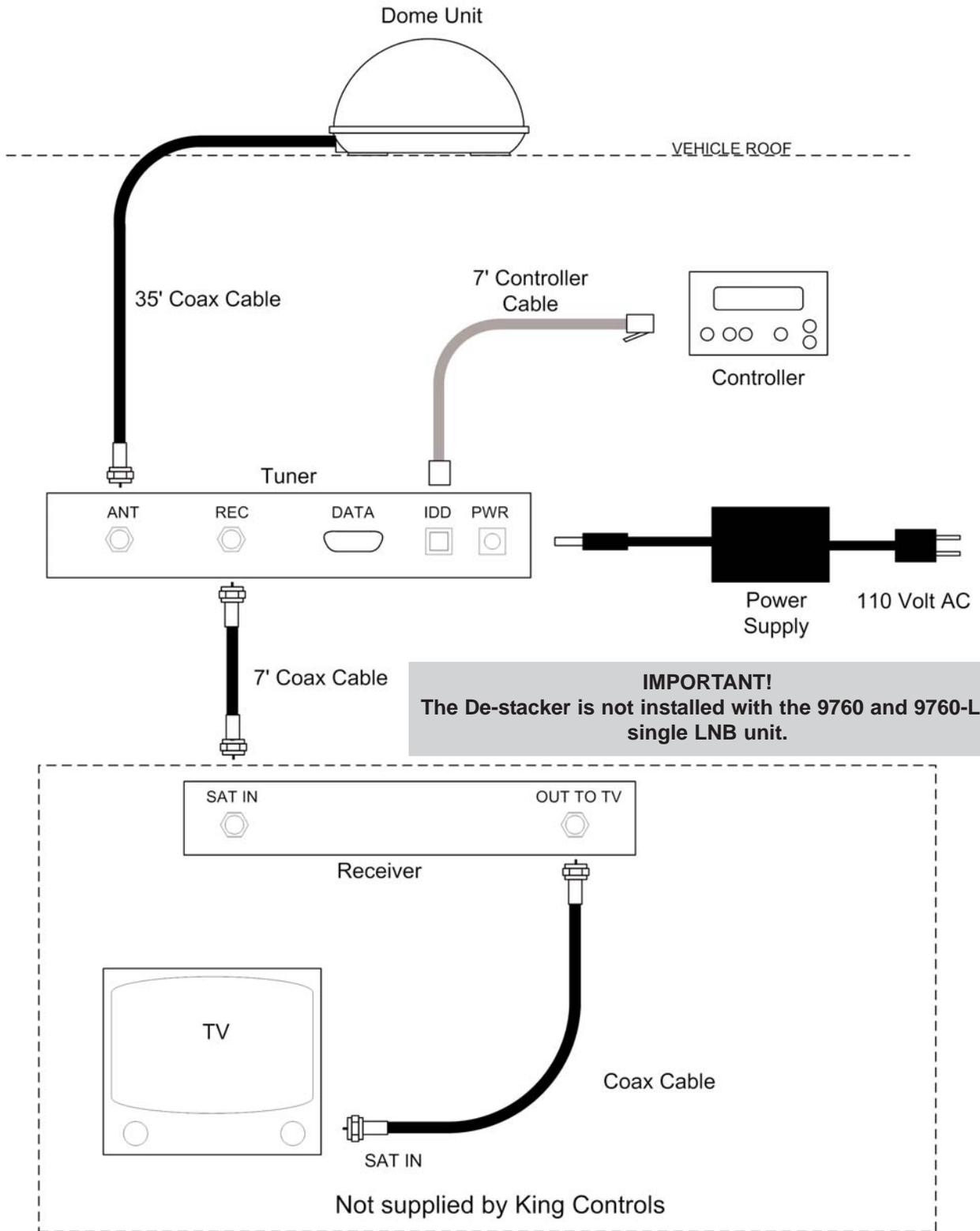


ELEVATION: Angle in degrees measured from the ground plane.

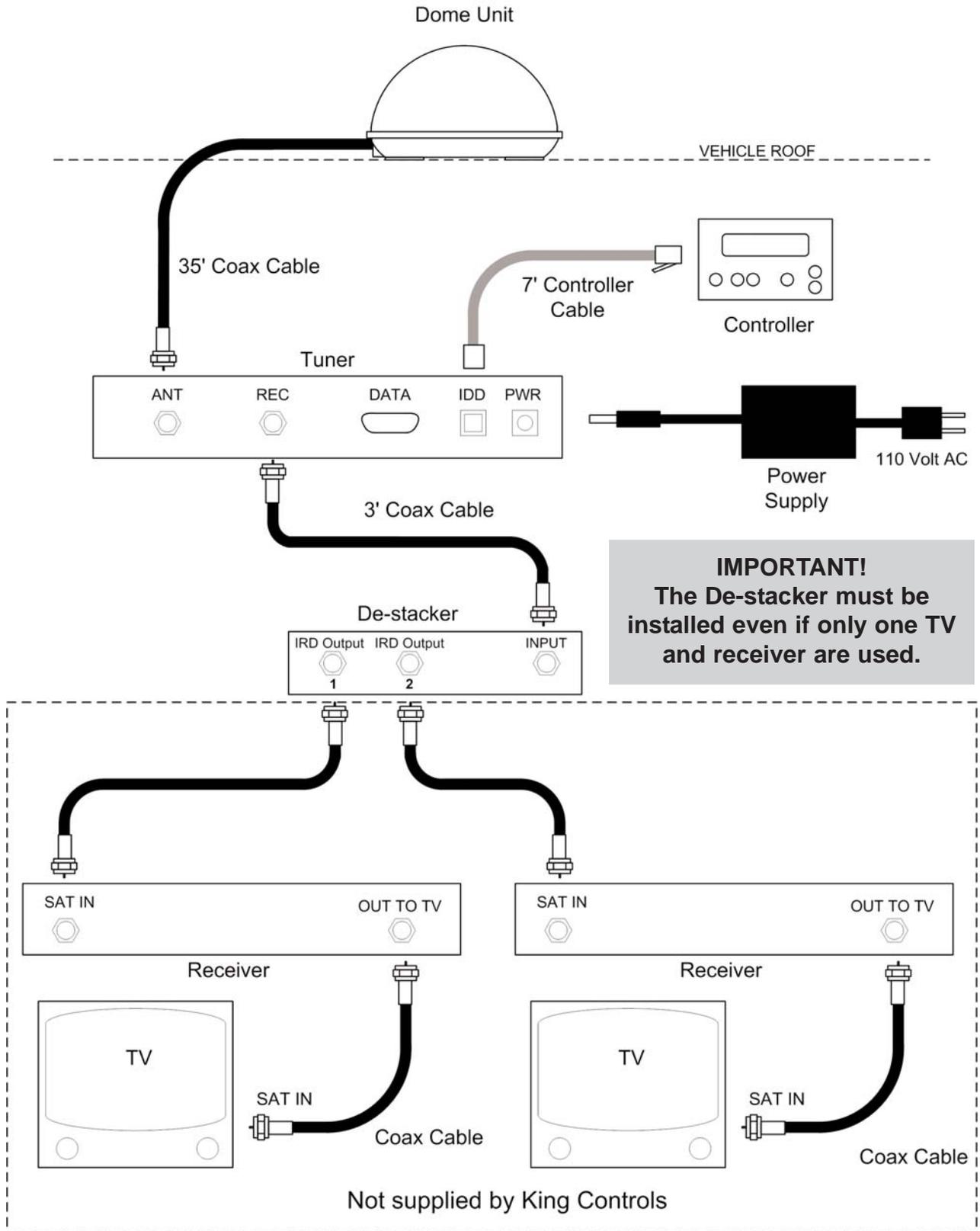


WIRING SCHEMATICS

9760, 9760-LP SINGLE LNB



9762, 9762-LP DUAL LNB



NOTES

DIRECTV® is an official trademark of DIRECTV, division of GM Hughes Electronics Corporation.
Dish Network® is an official trademark of Echostar Communications Corporation.
Bell ExpressVu® is an official trademark of Bell Canada.
DVB® is a trademark of the DVB Digital Video Broadcast Project (1991-1996)

WARRANTY CONSIDERATION FORM

Service Center Name	Customer Name *
Address	King-Dome® Serial Number * (located on base of King-Dome or on cover of Owner's Manual)
	Date of Original Purchase or Installation *
Phone No.	Make, Model and Year of Vehicle
Name and Title of person working on King-Dome®	Phone Log Number

**King-Dome®
Service Order Number ***

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*** REQUIRED**

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



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