



Troubleshooting Guide

9630 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

IMPORTANT!: There are two separate ranges of serial numbers each with its own specific information.

Section 3 is for units with serial number 169999 and lower.

Section 4 is for units with serial number 170000 and higher.

All other sections pertain to all serial numbers unless noted.

Note: For more detailed installation information, please refer to the 9630/9630-LP Installation and Operating Instruction Manual available on our website at www.kingcontrols.com.

TABLE OF CONTENTS

Section	Contents	Page
1.	INTRODUCTION	2
2.	WARRANTY INFORMATION	3
3.	SERIAL #169999 AND LOWER	4-9
	Basic Operation	4
	Keypad Functions	5
	Wiring Diagram for Flowchart	6
	Keypad Flowchart	7-9
4.	SERIAL #170000 AND HIGHER	10-15
	Basic Operation	10
	Keypad Functions	11
	Wiring Diagram for Flowchart	12
	Keypad Flowchart	13-15
5.	REFERENCE	16-28
	Block Times	16
	Elevation Maps	17-19
	Return Shipping Instructions	20-21
	Direct to Circuit Board Cable	22
	2-Part Removable Dome Feet	23
	Definition of Terms	24
	Warranty Consideration Form	28

DIRECTV® is a registered trademark of DIRECTV, Inc.

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)



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

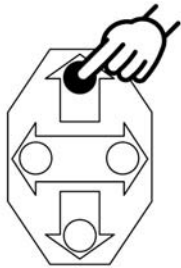
KEY POINTS

- 1) Technician must have the King-Dome Diagnostic Keypad #1844.
- 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.

BASIC OPERATION**Serial Number 169999 and lower**

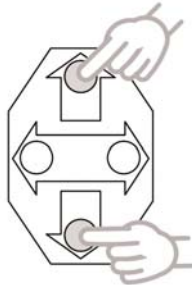
1. Turn TV and satellite receiver on.
2. Go to the signal meter screen on TV.
Choose transponder number:

Dish Network	#11
DIRECTV	#19
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 elevation maps in the Reference Section.



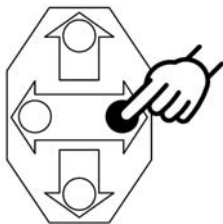
4. Press **UP** arrow on King-Dome Controller to turn King-Dome on.

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

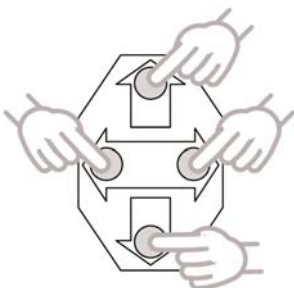


5. Press **UP** or **DOWN** arrow on King-Dome Controller to display dish elevation and match to elevation on TV signal meter screen or elevation from the elevation maps in the Reference Section.

IMPORTANT! In Step 6, as soon as you begin holding the right arrow, you must continuously monitor the TV signal meter screen until signal appears on TV.



6. Press and hold **RIGHT** arrow until Controller begins flashing "77."
Remember, you must watch for signal strength on TV!
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.



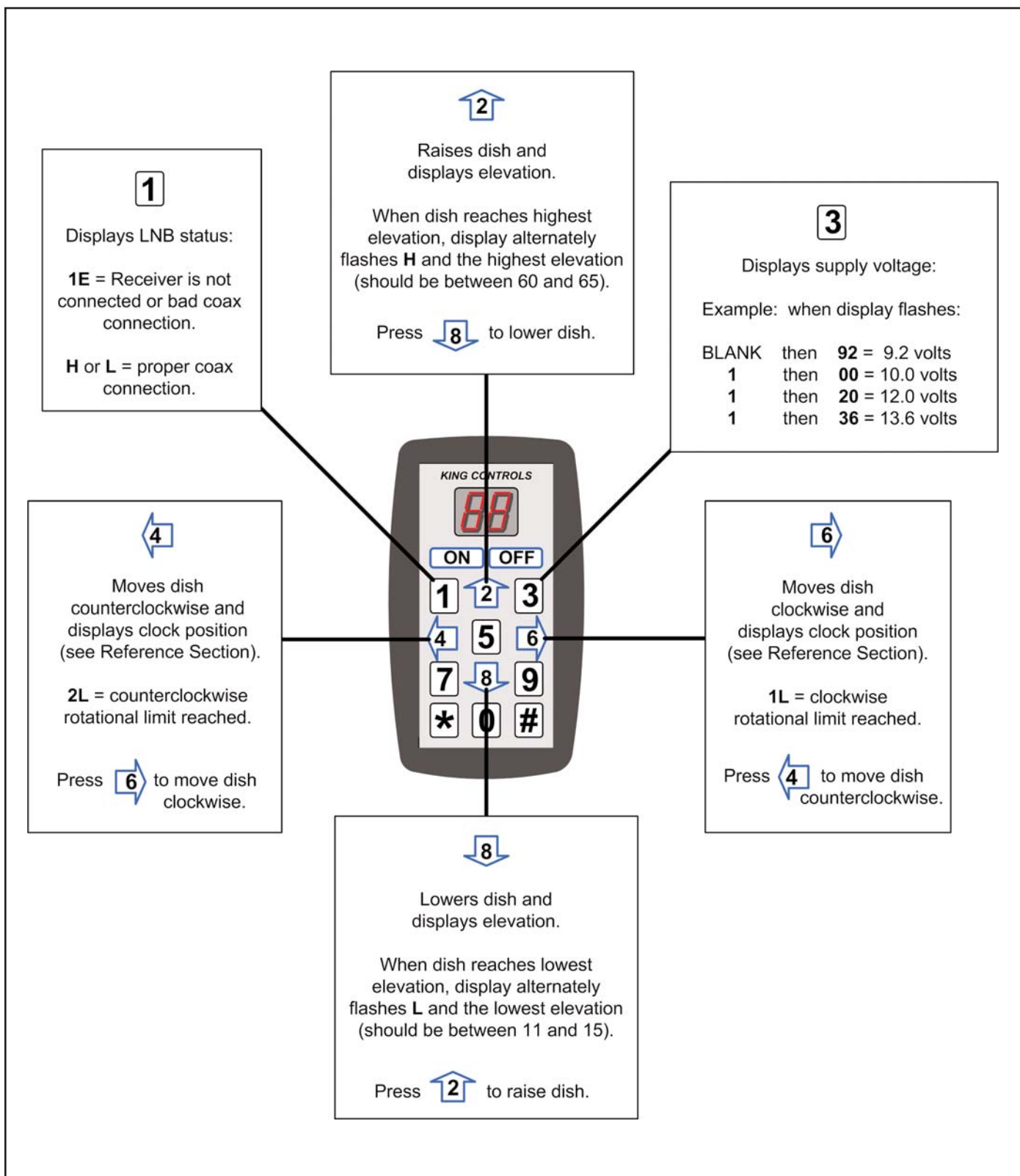
7. Press the **UP, DOWN, LEFT** or **RIGHT** arrows to fine tune signal strength to the highest possible number on TV signal meter screen. Enjoy your programming!

Controller automatically shuts off after 2 minutes.

KEYPAD FUNCTIONS

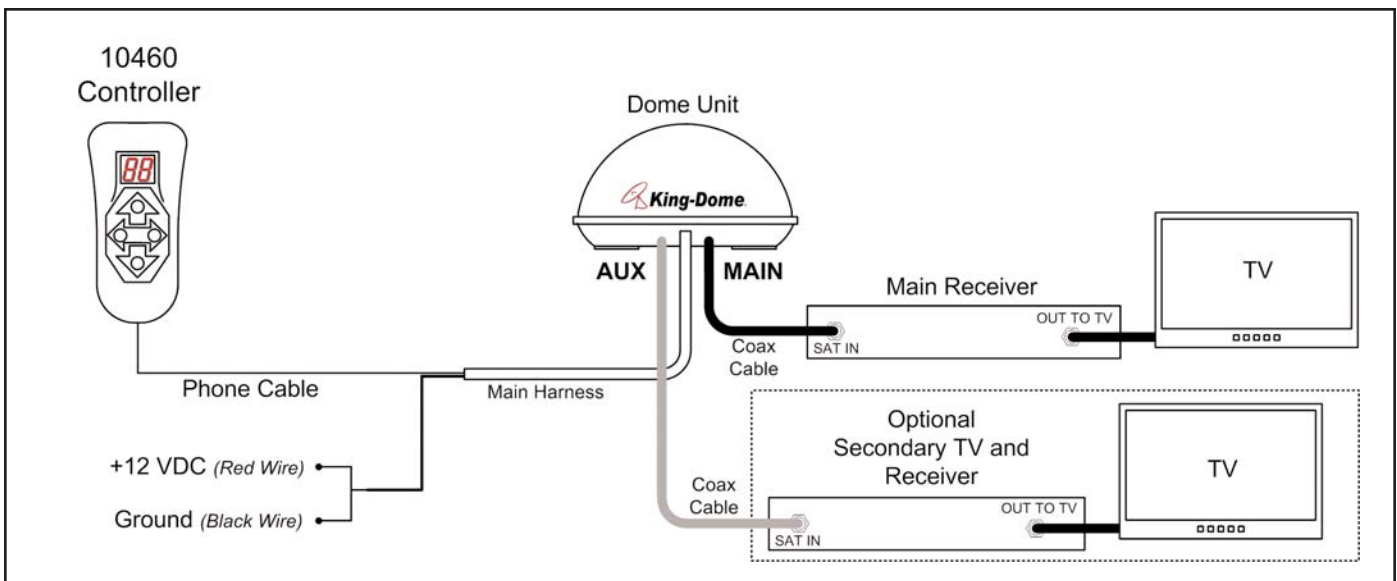
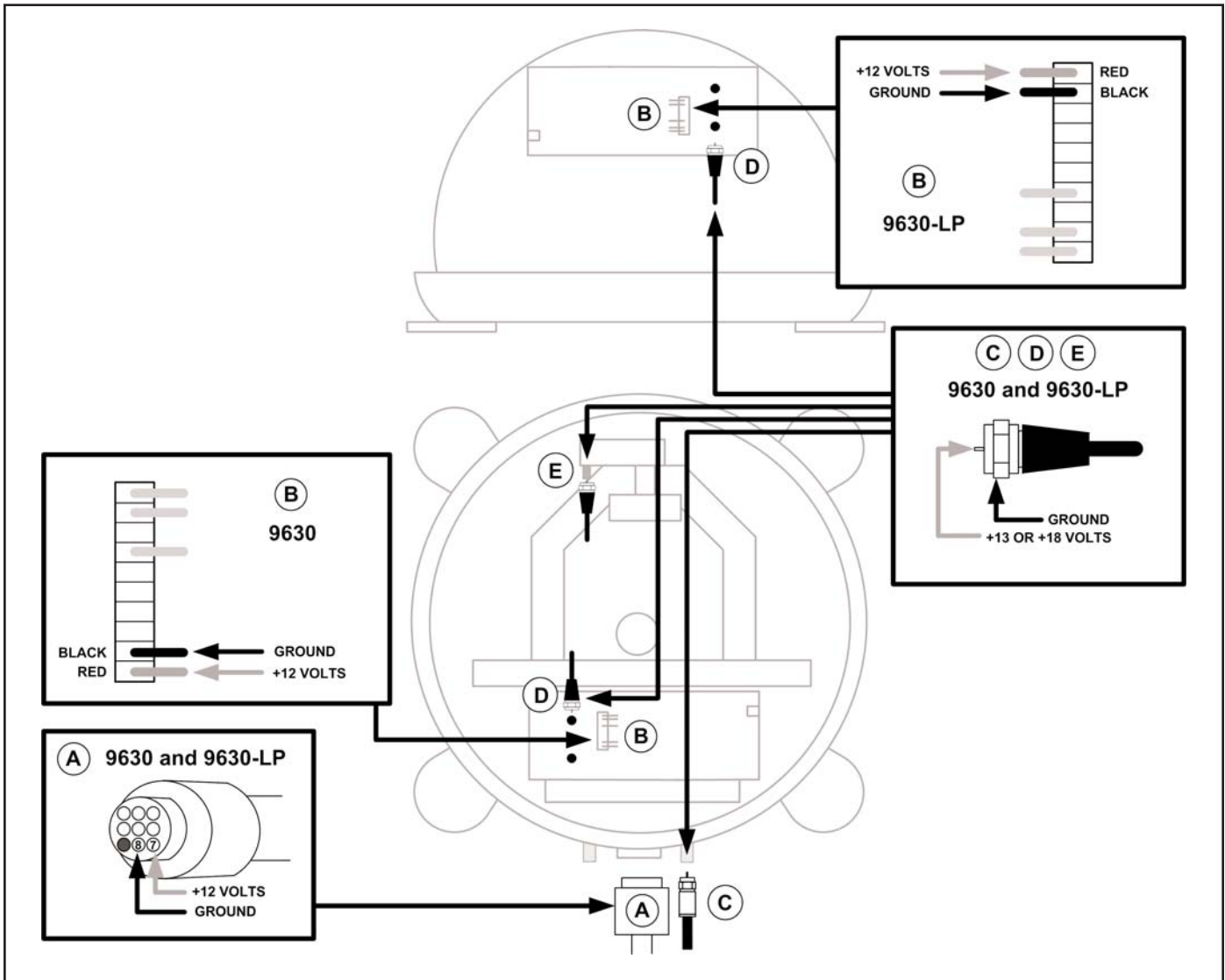
Serial Number 169999 and lower

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



WIRING DIAGRAMS FOR FLOWCHART

Serial Number 169999 and lower



KEYPAD FLOWCHART

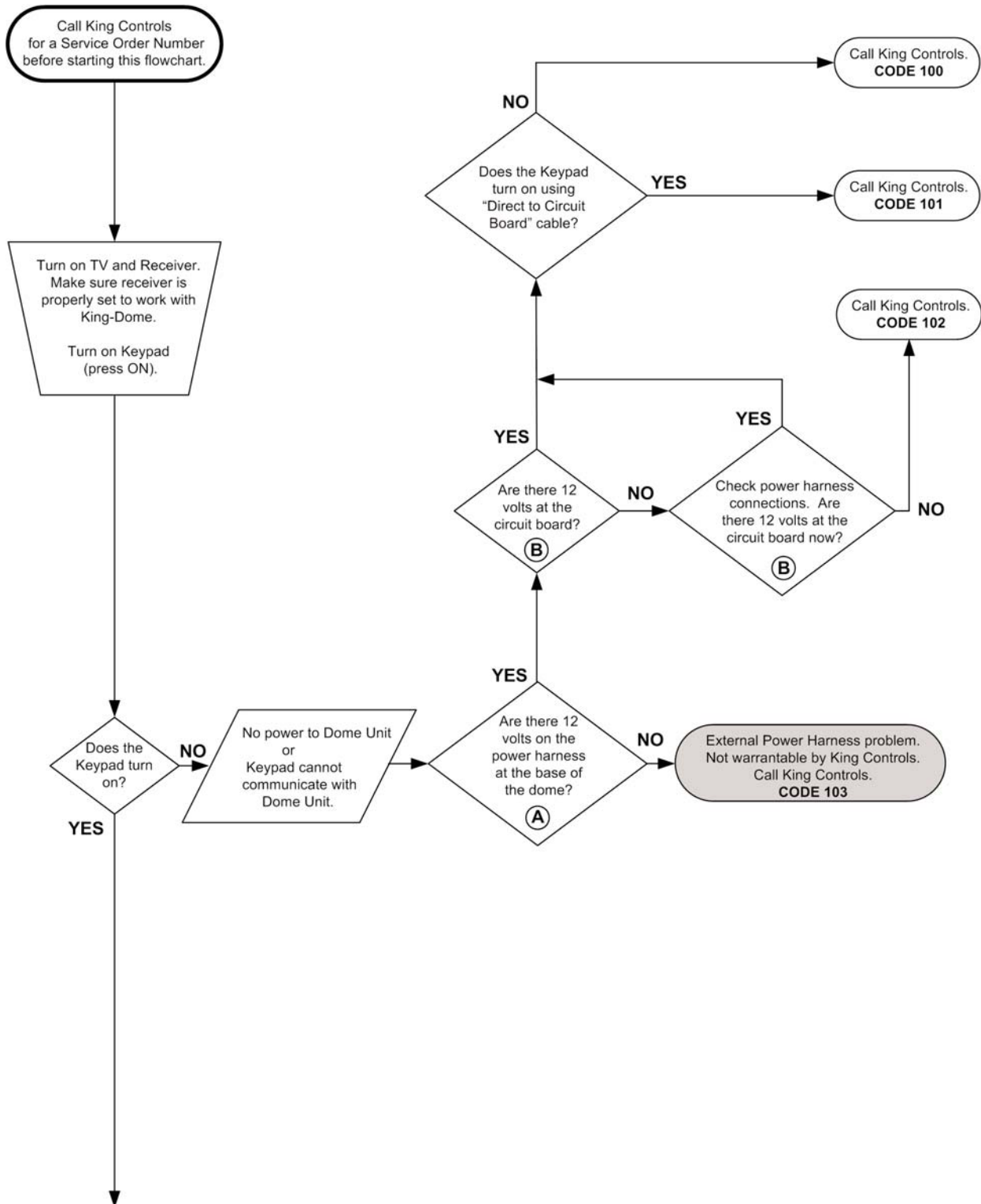
Serial Number 169999 and lower



IMPORTANT!

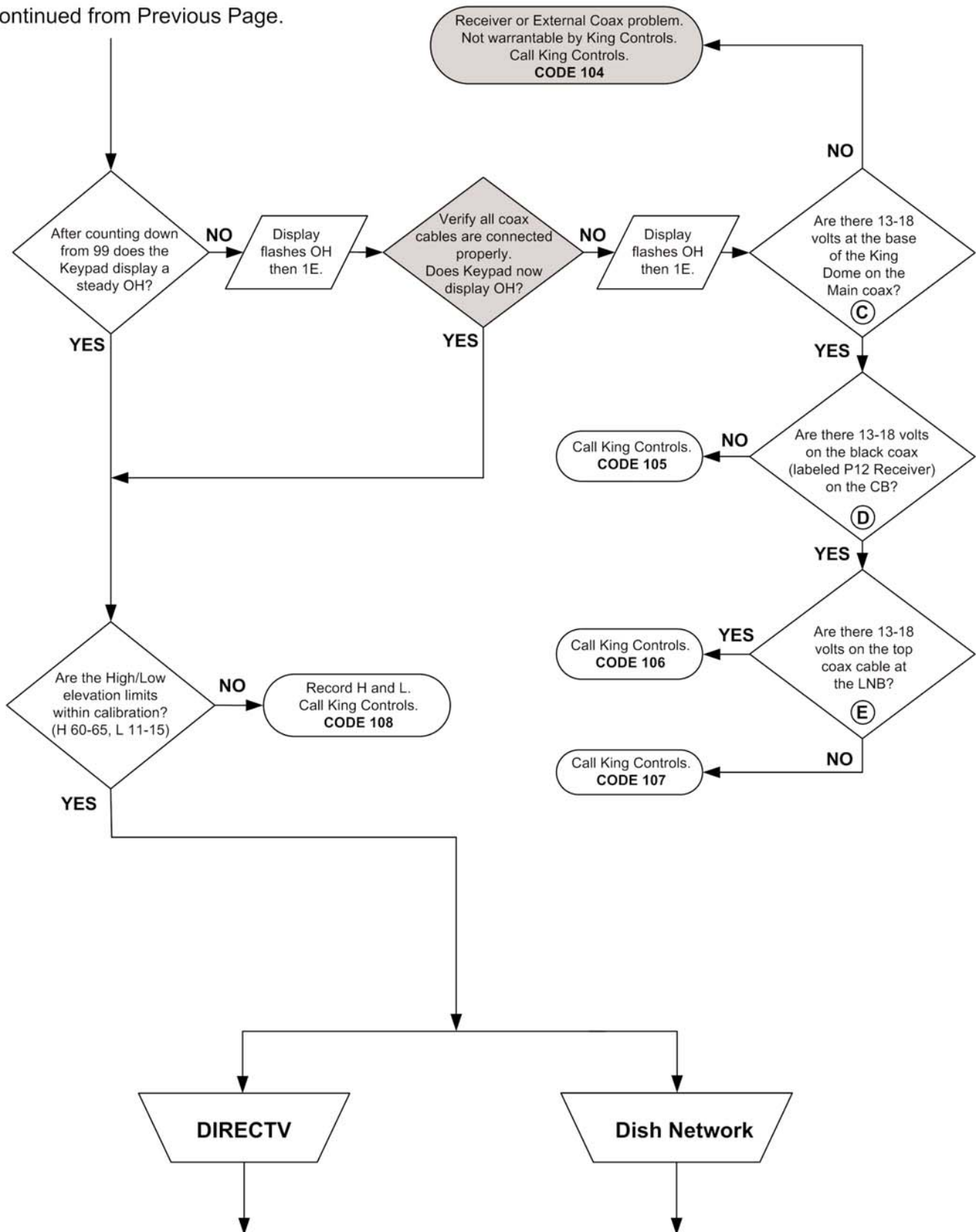
Before performing any warranty work, you must call King Controls for a Service Order Number.

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



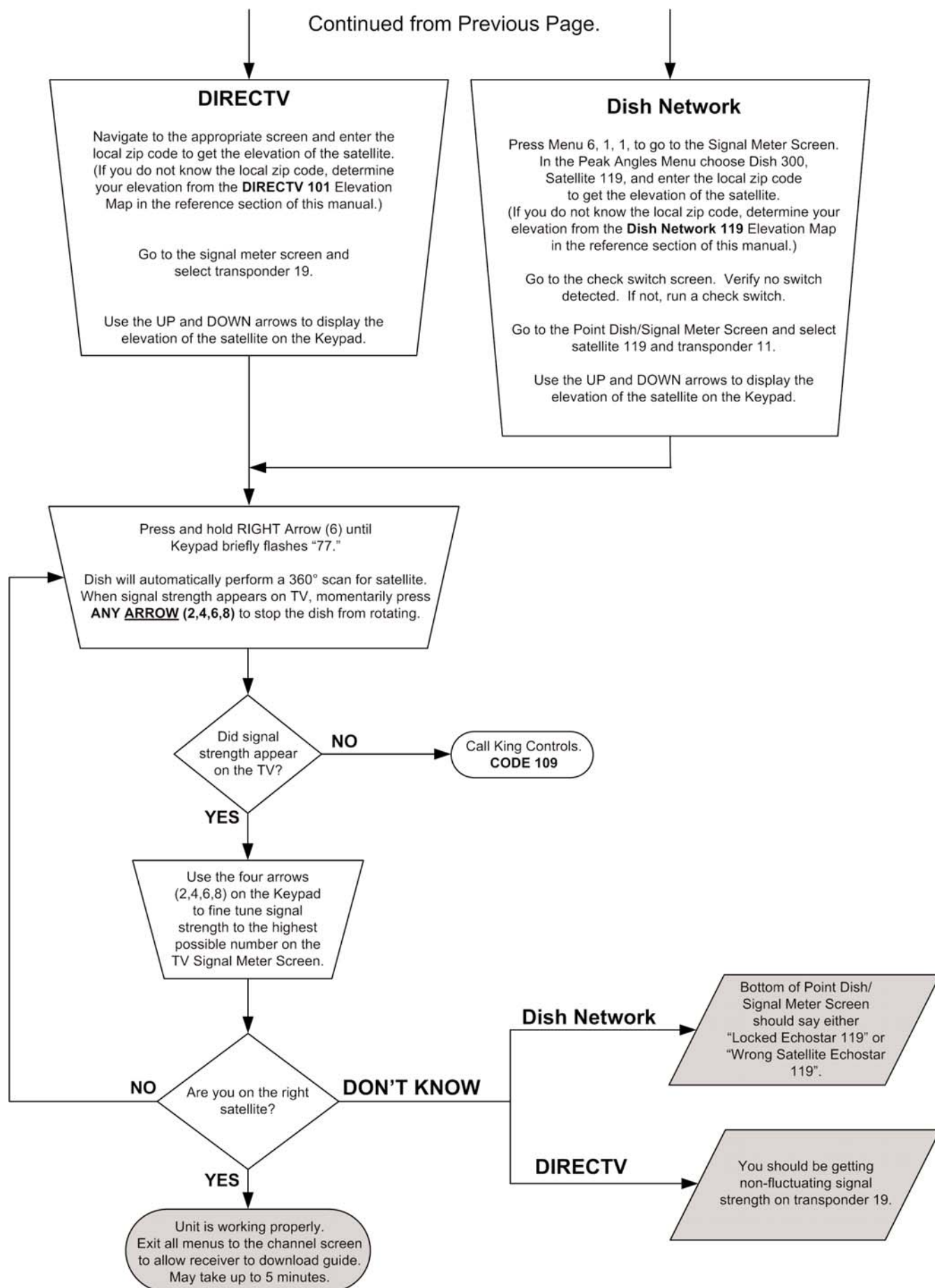
Continued on Next Page.

Continued from Previous Page.



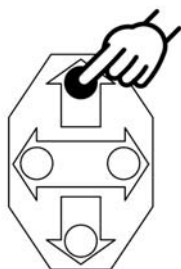
Continued on Next Page.

Continued from Previous Page.



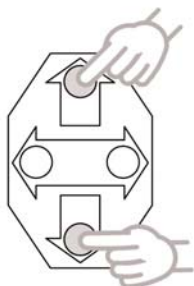
BASIC OPERATION**Serial Number 170000 and higher**

1. Turn TV and satellite receiver on.
2. Go to the signal meter screen on TV.
Choose transponder number: **Dish Network #11**
DIRECTV #19
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 elevation maps in the Reference Section.



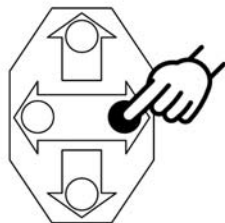
4. Press and hold **UP/ON** arrow on King-Dome Controller for **3 FULL SECONDS** to turn King-Dome on.

Note: The Controller will flash a series of codes and then display its elevation. Wait for the Controller to steadily display the elevation before continuing (about 10 seconds).

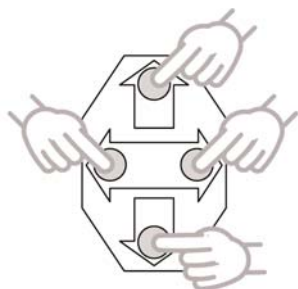


5. Press **UP** or **DOWN** arrow on King-Dome Controller to match elevation on Controller to elevation on TV signal meter screen or elevation from the elevation maps in Reference Section.

IMPORTANT! In Step 6, as soon as you begin holding the right arrow, you must continuously monitor the TV signal meter screen until signal appears on TV.



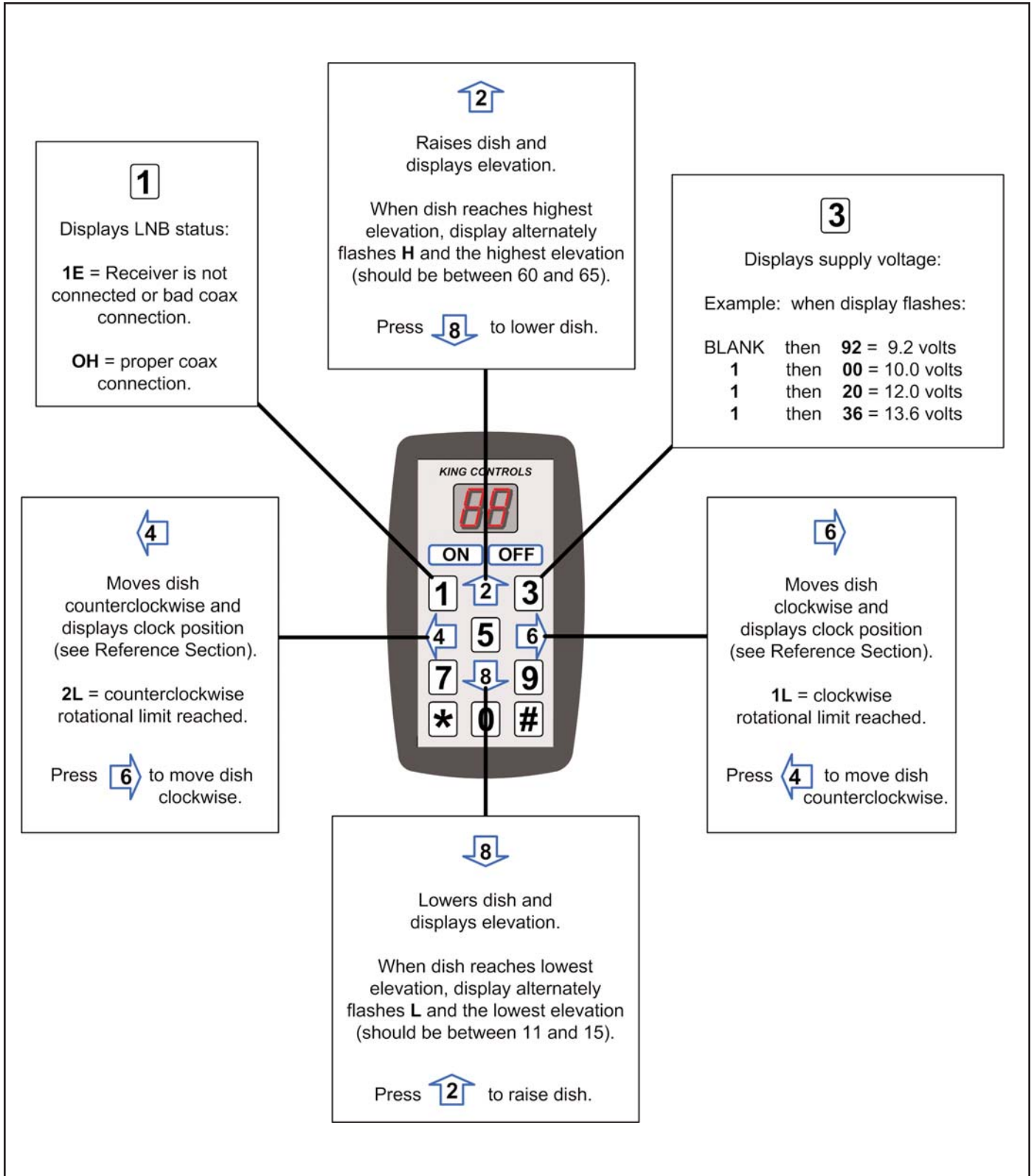
6. Press and hold **RIGHT** arrow until Controller begins **RAPIDLY** flashing its clock position (7-10 seconds).
Remember, you must watch for signal strength on TV!
Dish will automatically perform a 360 degree scan for satellite. When signal strength appears on TV, momentarily press **ANY BUTTON** to 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!



KEYPAD FUNCTIONS

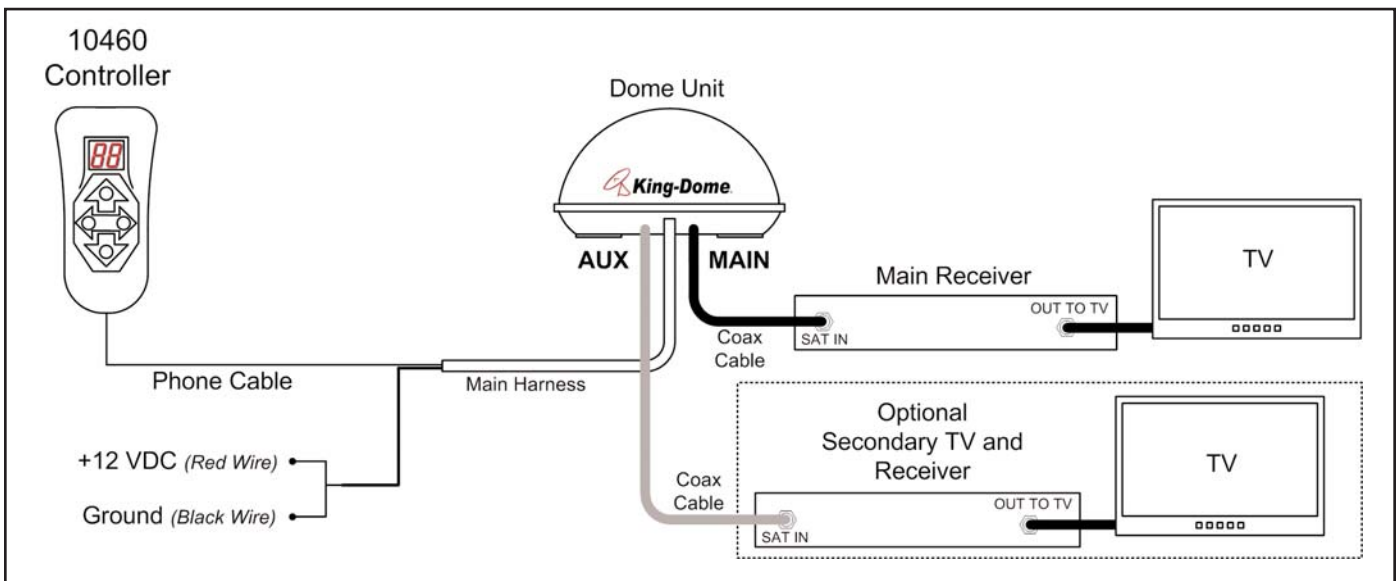
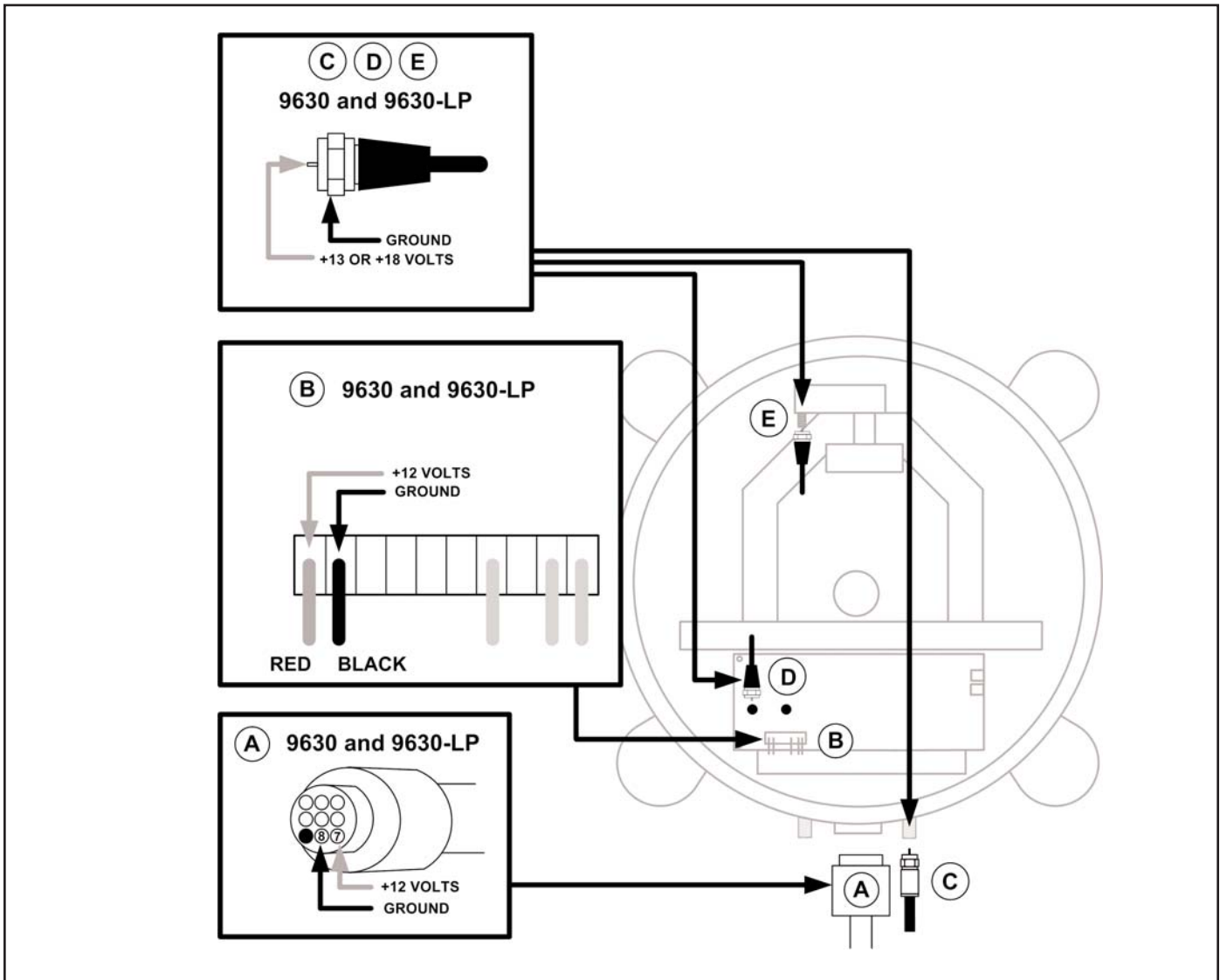
Serial Number 170000 and higher

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



WIRING DIAGRAMS FOR FLOWCHART

Serial Number 170000 and higher



KEYPAD FLOWCHART

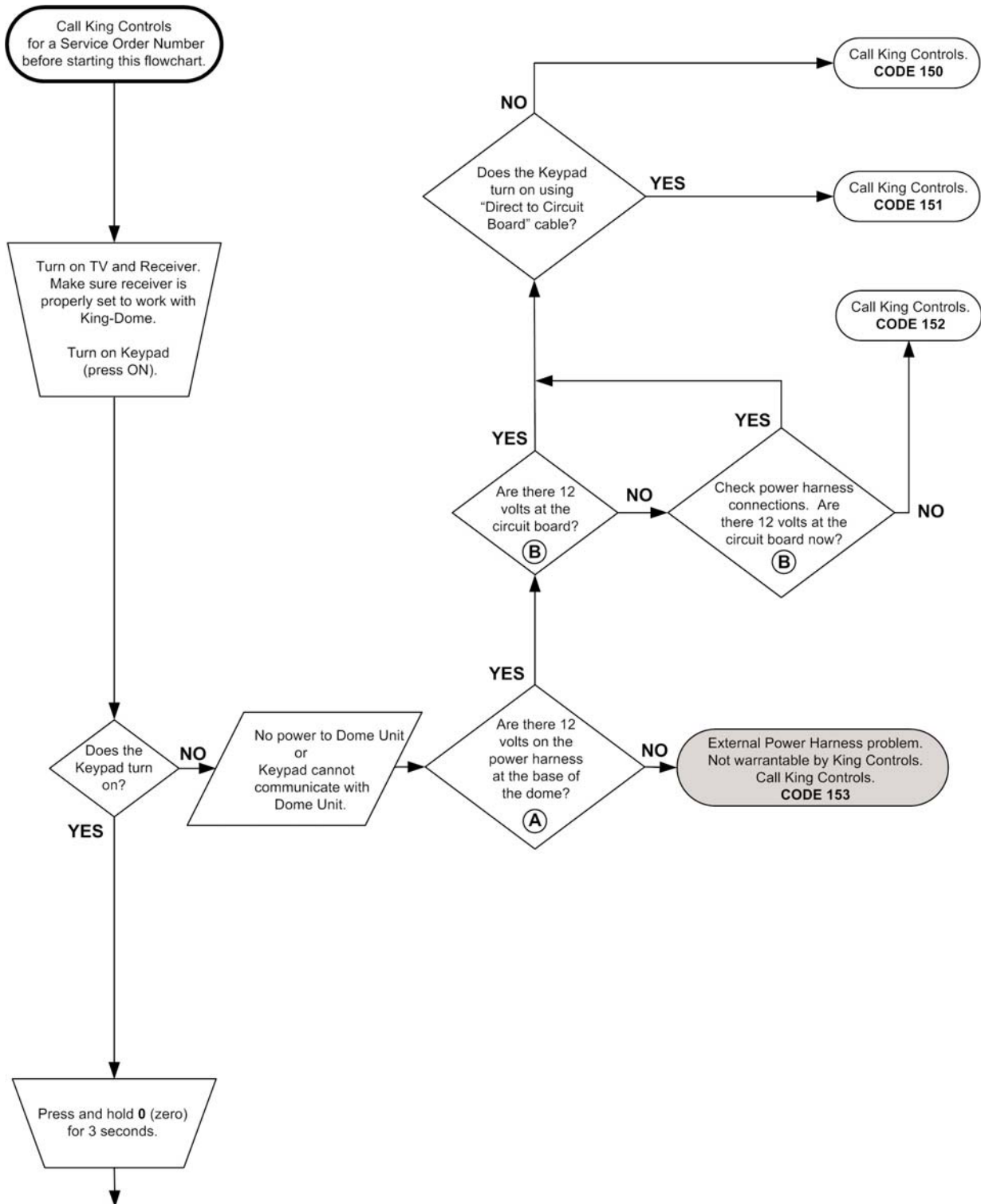
Serial Number 170000 and higher



IMPORTANT!

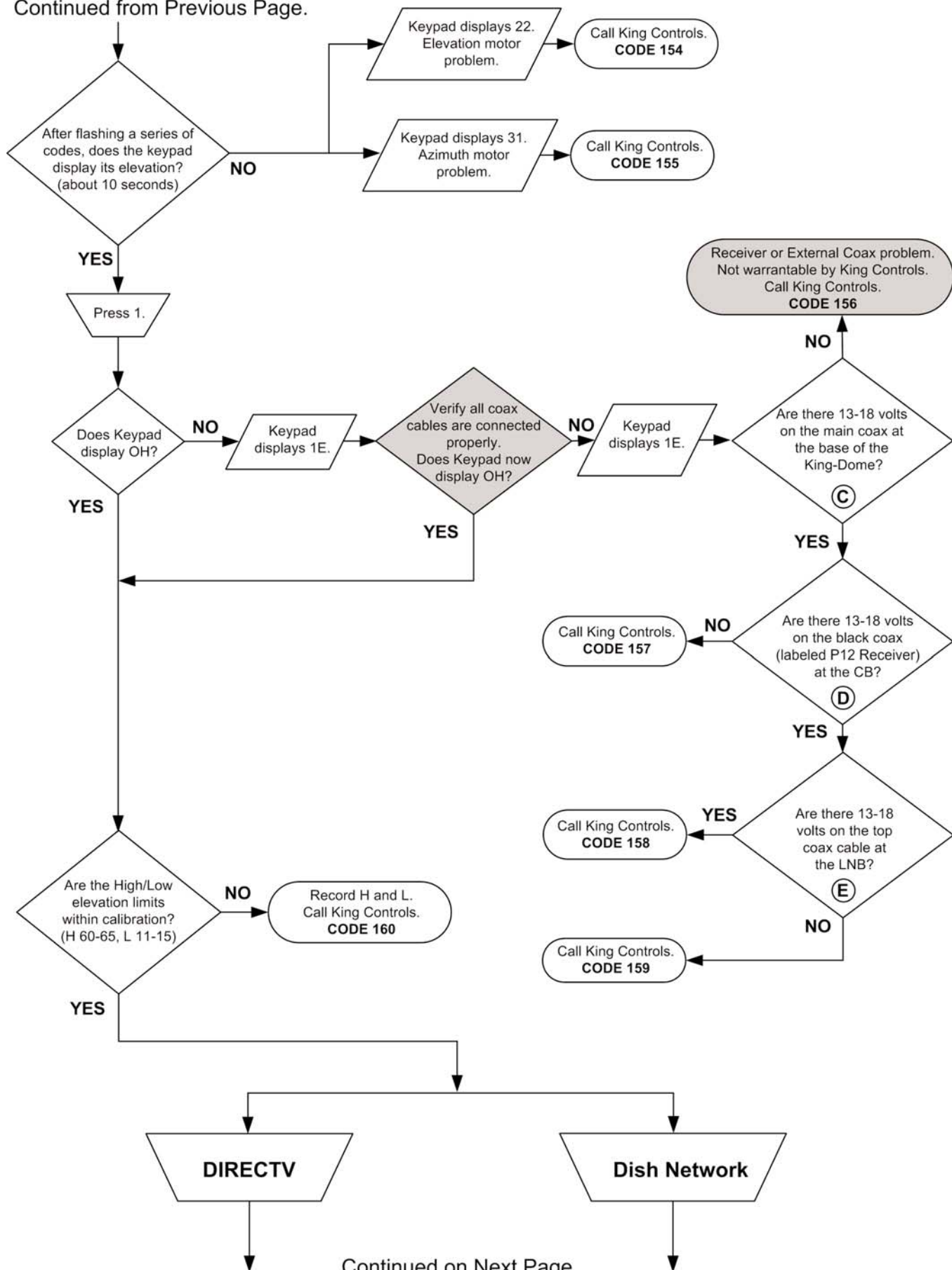
Before performing any warranty work, you must call King Controls for a Service Order Number.

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



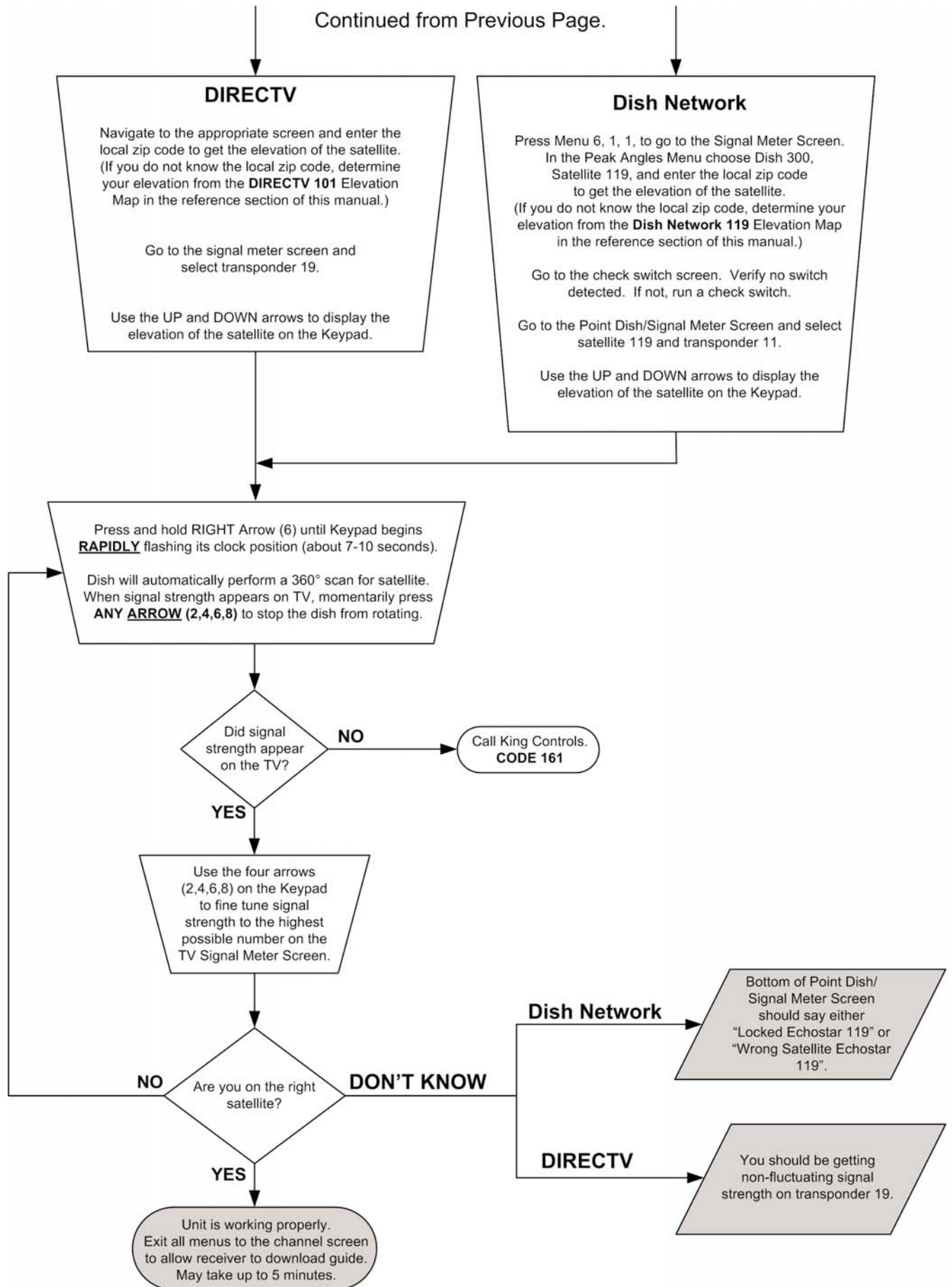
Continued on Next Page.

Continued from Previous Page.



Continued on Next Page.

Continued from Previous Page.



TROUBLESHOOTING BLOCK TIMES
All Serial Numbers

Note: See www.kingcontrols.com for detailed instructions.

9630, 9630-LP AUTOSCAN	Time in Minutes
Level Can and Circuit Board	45
Elevation Motor Assembly	45
LNB with position marked	45

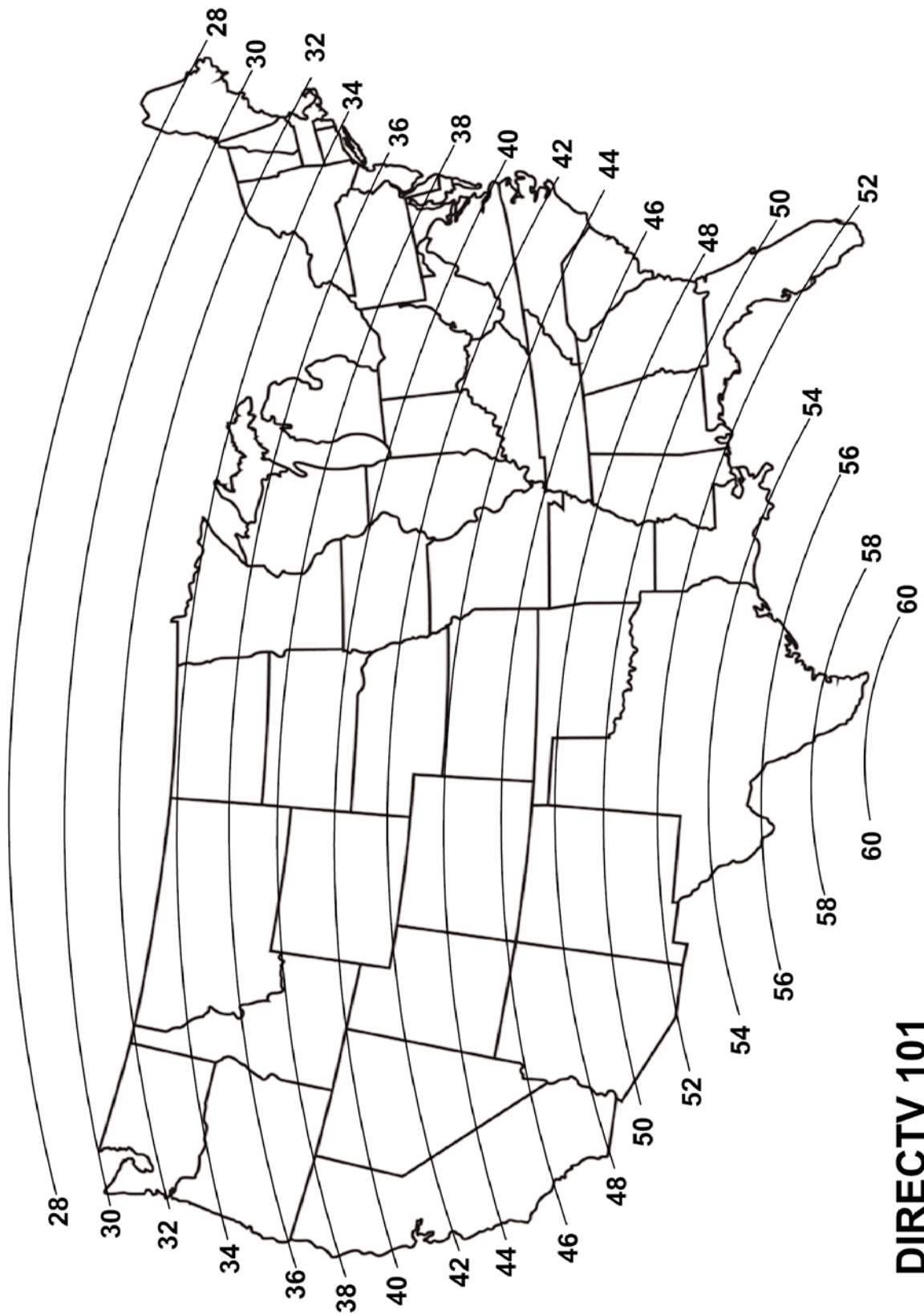


**You must call King Controls
before performing any warranty work.**

(800) 982-9920

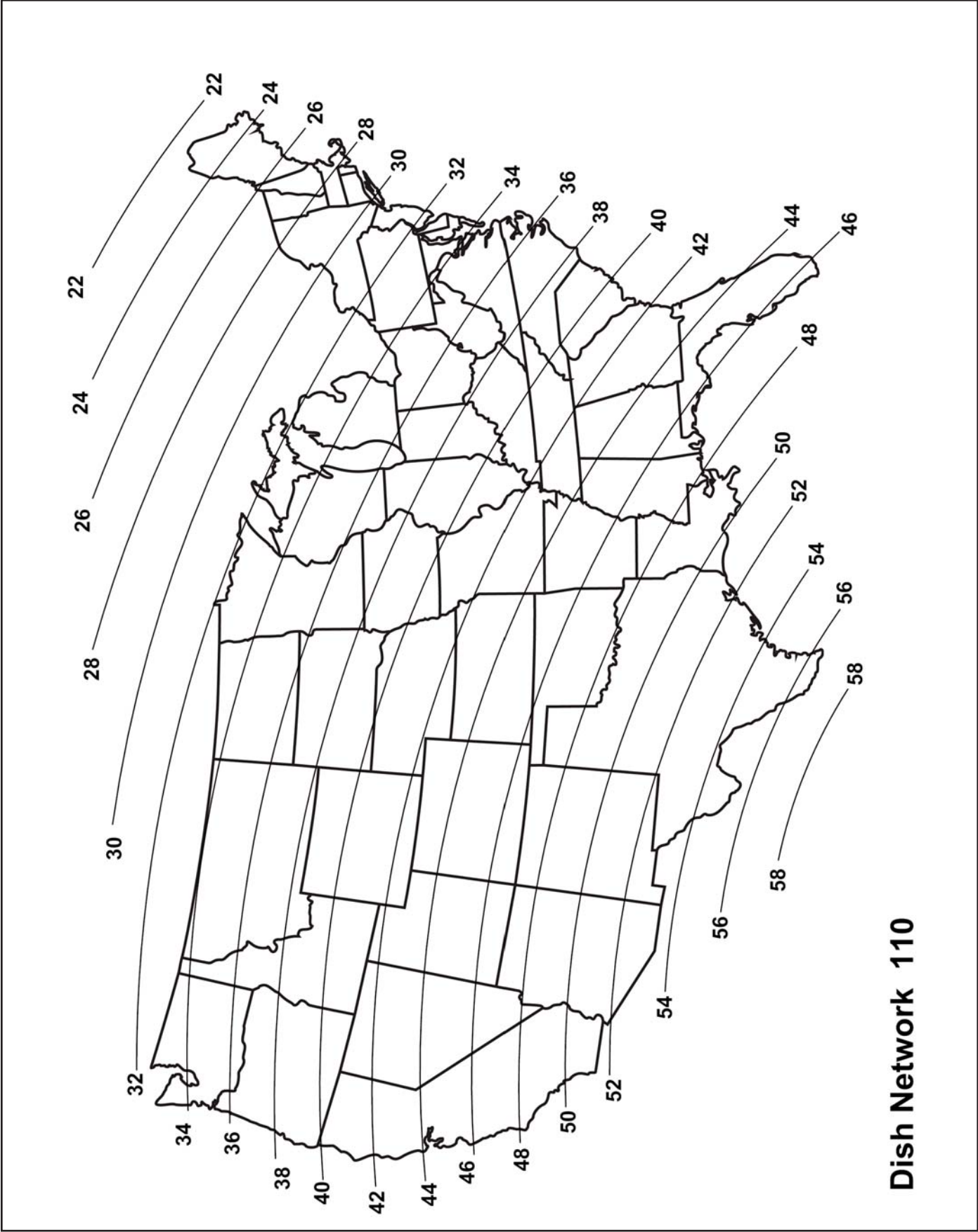
ELEVATION MAP FOR DIRECTV 101

All Serial Numbers



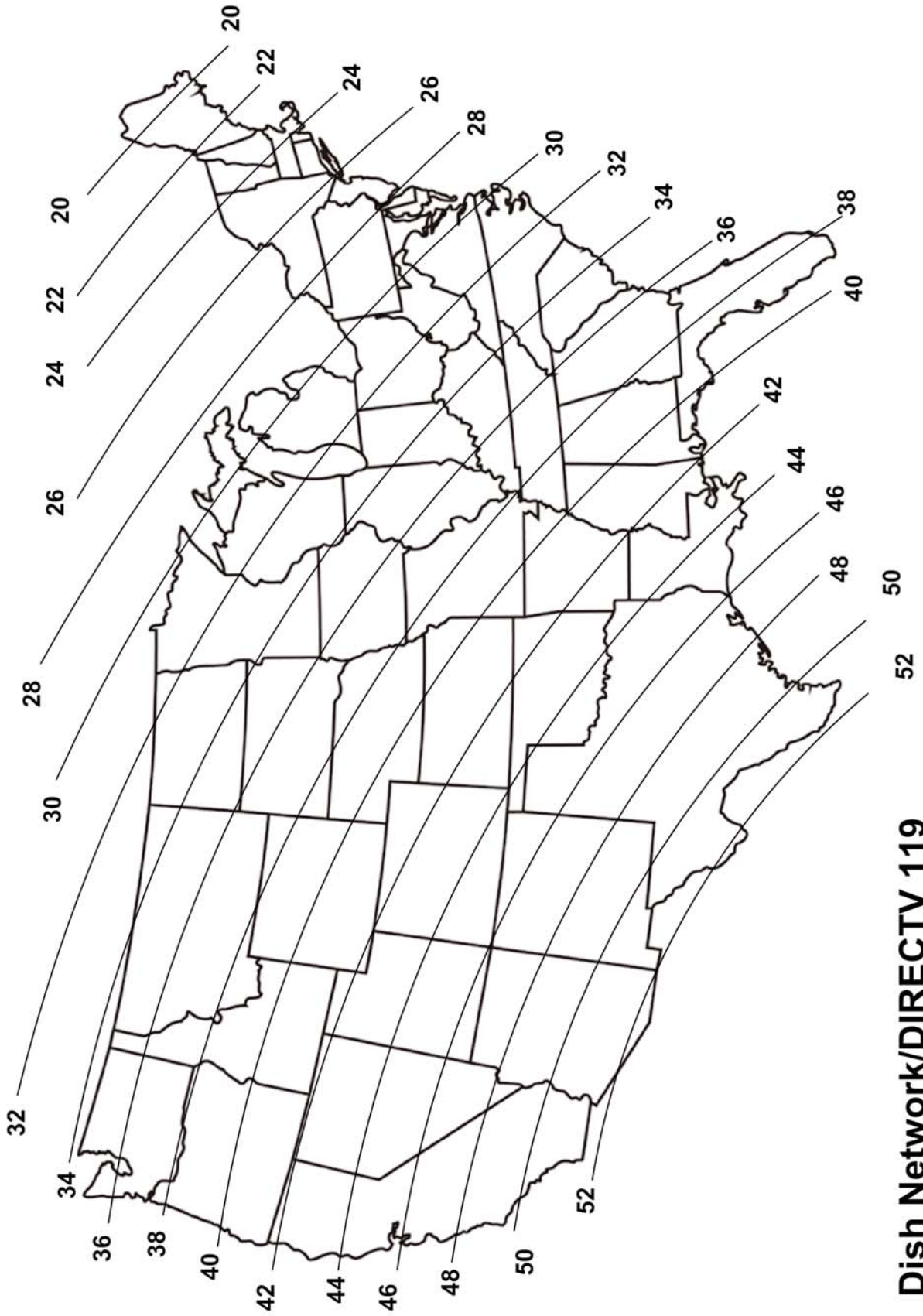
DIRECTV 101

ELEVATION MAP FOR DISH NETWORK 110
All Serial Numbers



ELEVATION MAP FOR DISH NETWORK / DIRECTV 119

All Serial Numbers



Dish Network/DIRECTV 119

RETURN SHIPPING

All Serial Numbers

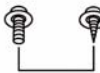
IMPORTANT! When returning a unit, you must package it in the box from the replacement unit. Use all included internal packaging, and be sure to attach outer feet removed from new unit.

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).

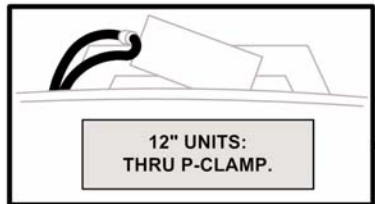
1. Turn rotating bracket to align shipping bolt hole(s) with hole(s) in base.
(Some units may only have one shipping bolt.)
2. Insert shipping bolt(s) thru washer(s) and base and FINGER TIGHTEN into rotating bracket.
3. Lower dish arm. (Gently push on dish and arm simultaneously. Lower until arm is just 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

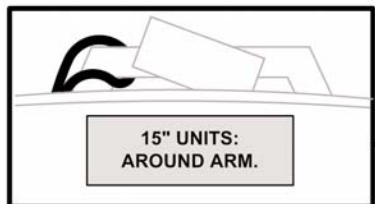
King Controls Screw #6405-1
(for units with brass inserts in base)



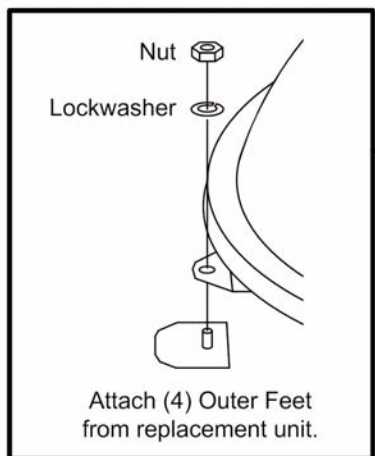
King Controls Screw #6507
(for units with no brass inserts in base)



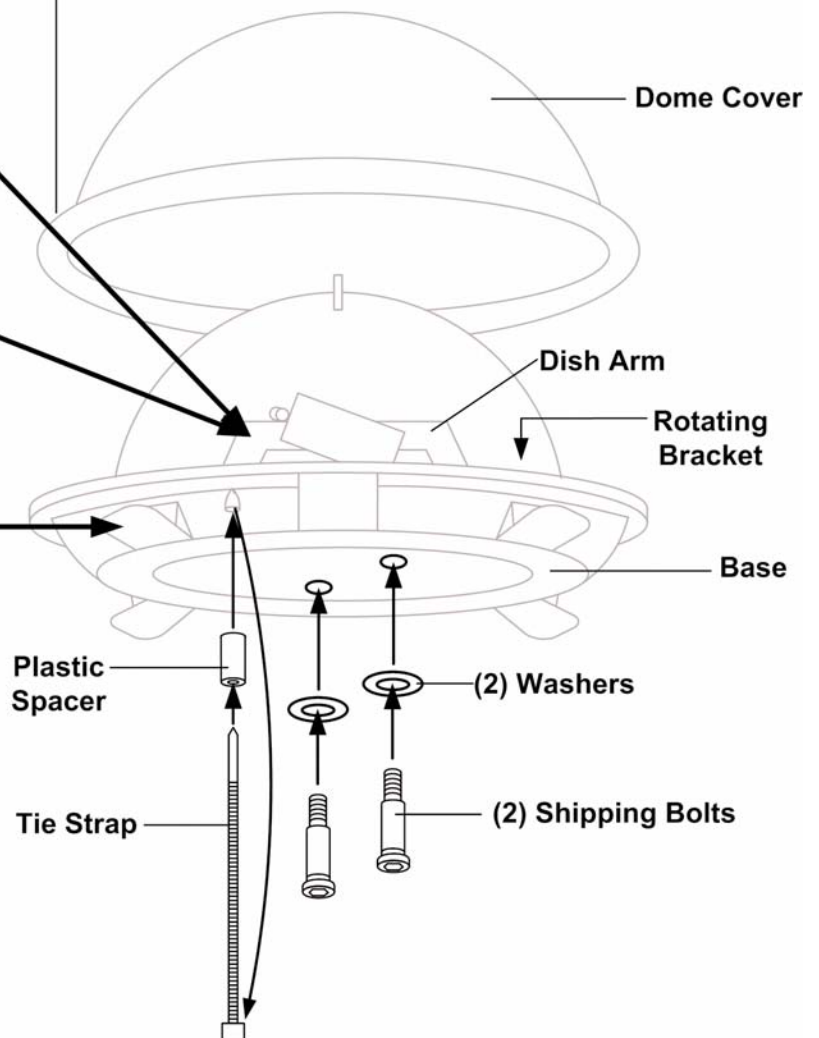
12" UNITS:
THRU P-CLAMP.



15" UNITS:
AROUND ARM.



Attach (4) Outer Feet
from replacement unit.



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

Note: Some units may have only one shipping bolt.

DIRECT TO CIRCUIT BOARD CABLE

All Serial Numbers

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

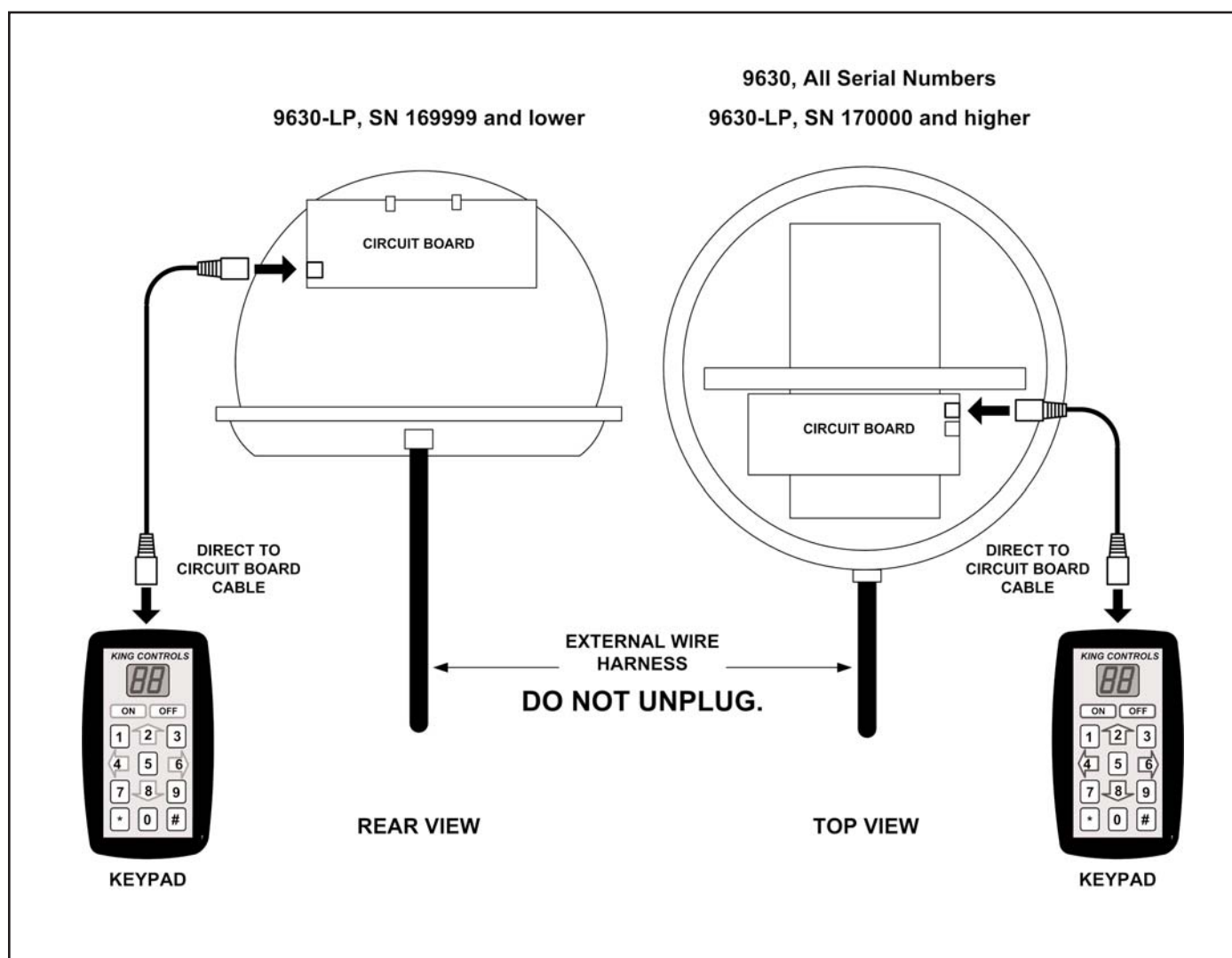
Call King Controls before performing this procedure.

Note: Warranty does not cover external wiring.

The Direct to Circuit Board Cable (supplied by King Controls) 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.

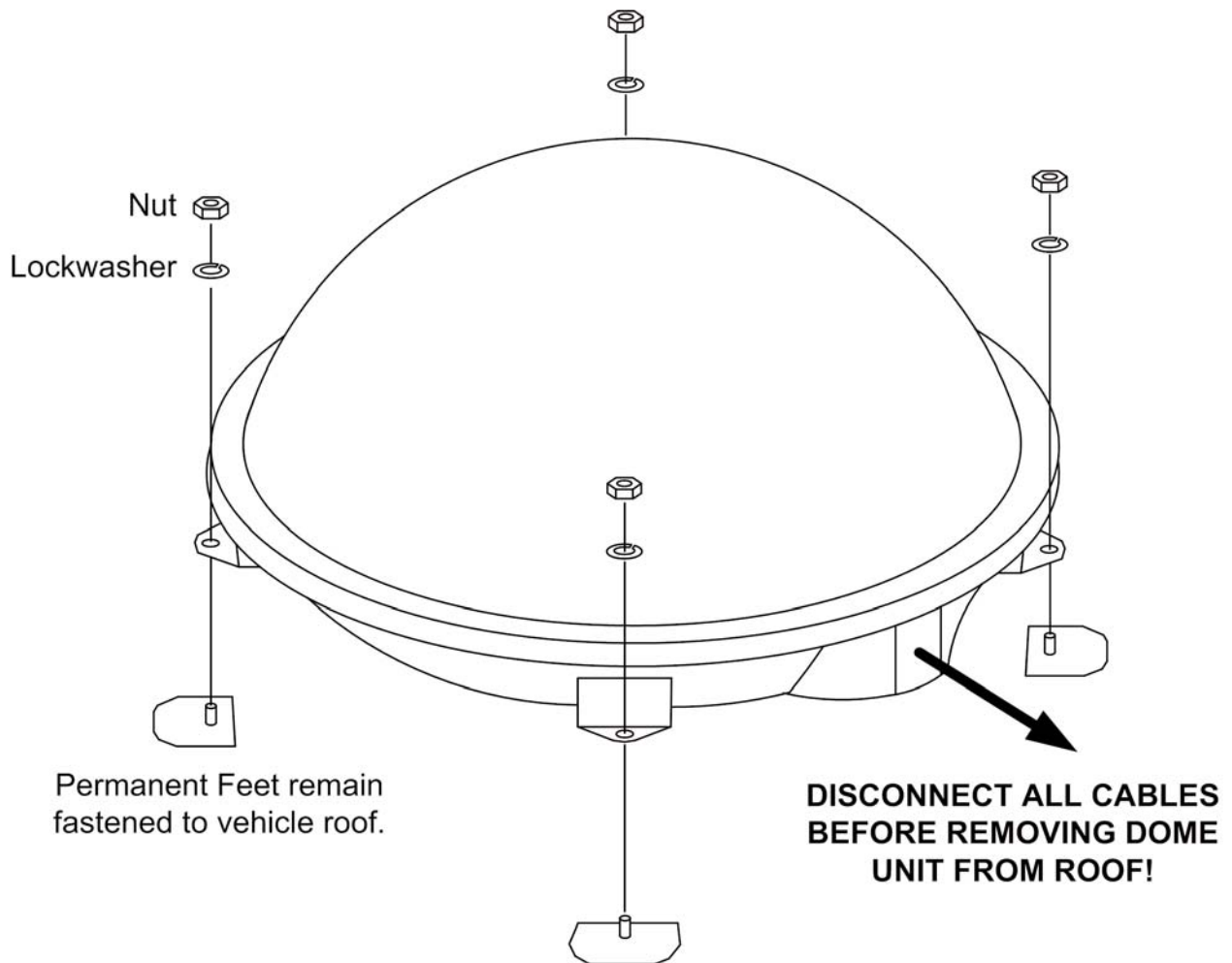
Connect the Direct to Circuit Board Cable between the Keypad and the circuit board and press ON. The Keypad should turn on.



2 PART REMOVABLE DOME FEET

Note: Newer King-Dome 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.

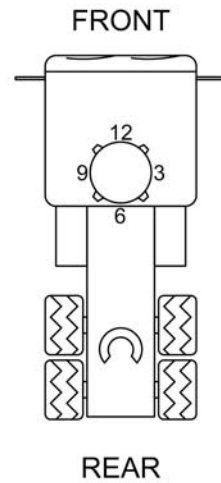
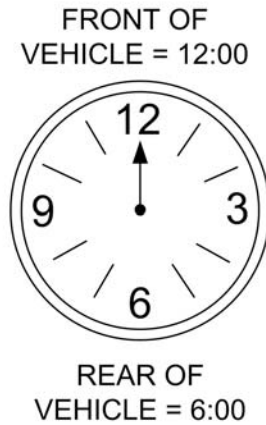
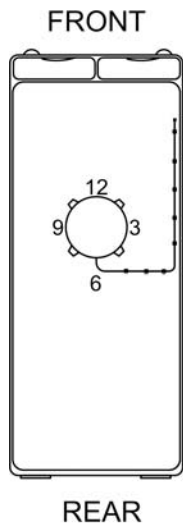


DEFINITION OF TERMS

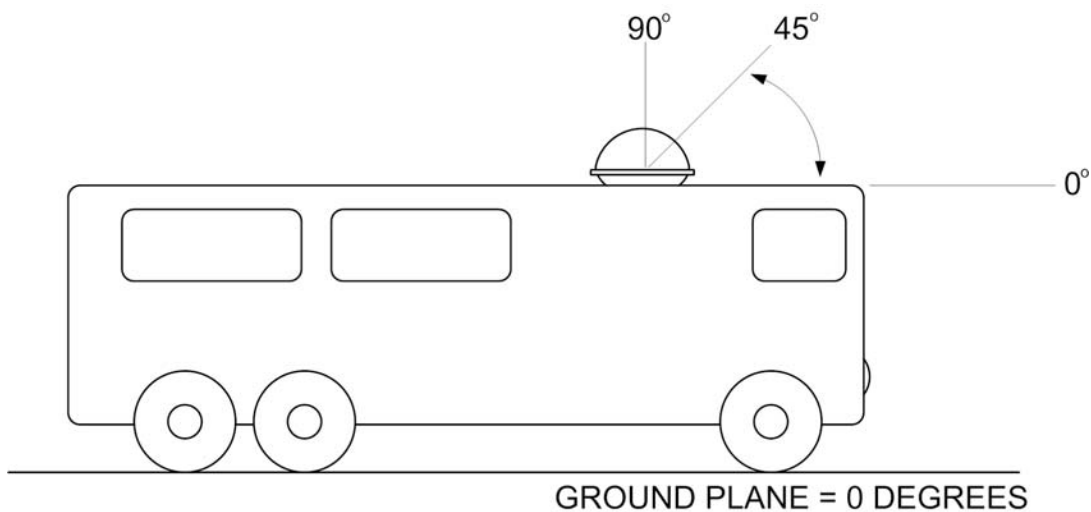
All Serial Numbers

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.



NOTES:

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 (800) 982-9920
www.kingcontrols.com





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

www.kingcontrols.com