



# *ZINWELL*

“

**Hey, I've Got a Multi-Switch!  
Now what?**

”

ZINWELL

DIRECTV Approved  
Indoor/Outdoor Wideband  
6x8 Multi-Switch  
Model WB68

installation  
guide

**For technical  
support,  
please call  
Zinwell Corp.**

**(909) 718-0555**

**Do not call  
DIRECTV.**

## General Information

The Zinwell WB68 is a DIRECTV-approved, 6x8 multi-switch, designed to expand the new Ka/Ku Satellite Dish Antennas from 4 outputs to 8 outputs, supporting up to 8 independently operating receivers. The WB68 supports all DIRECTV® Receivers, but is specially designed to work with the newest MPEG4-capable DIRECTV HD Receivers, such as the model H20.

The WB68 supports up to two additional inputs using “Flexports” from satellites at locations such as 95° West Longitude (W.L.) and 72.5° W.L.

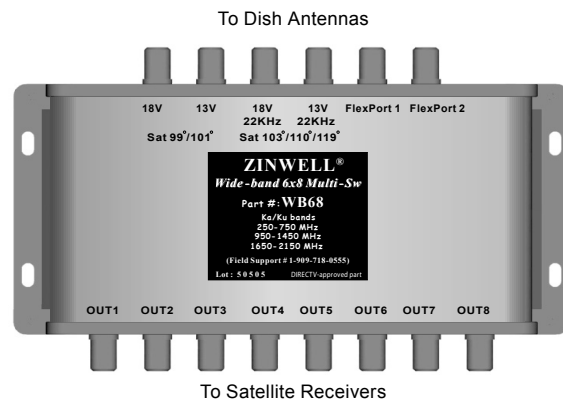
If you connect an older (non-MPEG4-capable) DIRECTV Receiver that has the auto-configure feature to the WB68, do not use the auto-configure feature; manually selecting the dish type will speed up the installation process. If you do run the auto-configure feature, and you have multiple receivers, run auto-configure on only one receiver at a time, and before running, make sure the other receivers are using a channel on the satellite at 101° W.L. (Channel 100 is suggested.) This will reduce data acquisition time and minimize error.

The WB68 is passive, powered only by the connected DIRECTV Receiver(s). There is no retail equivalent multi-switch. Flexports require selection codes unique to DIRECTV; other ports can be accessed with either tone/voltage or selection codes.

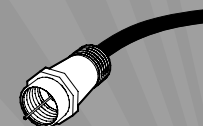
The WB68 can be used to replace a SAM-6802 narrowband 6x8 multi-switch. The SAM-6802 is being phased out.

## Installing the WB68

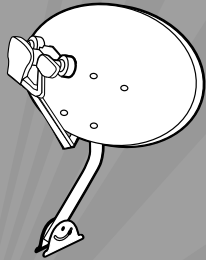
1. Use RG-6 coax cable with a solid-copper center connector. Other types of cables may cause more voltage drop that will result in poor or no signal to the receiver. Note: The RG-6 cable should have proper exterior waterproof connectors.
2. Mount the WB68 in a protected environment where it is shielded from rain and other water (sprinklers, etc.).
3. Use F-Connectors rated to at least 2150MHz.
4. Minimize the number of splices or connections between the WB68, the satellite dish and your DIRECTV Receivers to minimize signal reflection and signal strength drop.
5. If you have more than one DIRECTV Receiver connected to the WB68, run Guided Setup on each, one at a time.
6. Make sure the other receivers are configured for satellite 101° W.L., and tuned to Channel 100. This will reduce setup time and minimize error.



2



F-Connector and  
RG-6 Cable



## Technical Information

The Ka/Ku satellite dish has “traditional” 101°/110°/119° W.L. LNBs and two additional Ka LNBs for 99.2° W.L. and 102.8° W.L. satellite, respectively, hereby called 99° W.L. and 103° W.L. LNB for simplicity.

The stacked signal at each output of the dish antenna or the 6x8 multi-switch follows the frequency plan below. The actual signal availability varies depending on user location and DIRECTV satellite deployment dates:

<b>Stack Plan</b>	Ka-Lo, 99° RHCP	Ka-Lo, 99° LHCP	Ka-Lo, 103° RHCP	Ka-Lo, 103° LHCP
	Ku, 101° RHCP	Ku, 101° LHCP	Ku, 119° RHCP	Ku, 110°/119° LHCP
	Ka-Hi, 99° RHCP	Ka-Hi, 99° LHCP	Ka-Hi, 103° RHCP	Ka-Hi, 103° LHCP
<b>Output IF Frequencies</b>	Ka-Lo: 250-750 MHz	Ka-Lo: 250-750 MHz	Ka-Lo: 250-750 MHz	Ka-Lo: 250-750 MHz
	Ku: 950-1450 MHz	Ku: 950-1450 MHz	Ku: 950-1450 MHz	Ku: 950-1450 MHz
	Ka-Hi: 1650-2150 MHz	Ka-Hi: 1650-2150 MHz	Ka-Hi: 1650-2150 MHz	Ka-Hi: 1650-2150 MHz

## Adding Receivers to the Flexports

Consult the Installation Guide for your Satellite Dish for 6x8 setup procedures.

With an older (non-MPEG4-capable) satellite receiver, if you have either 72.5° W.L. or 95° W.L. inputs, always use FlexPort 1. If you have both 72.5° W.L. and 95° W.L. inputs, use FlexPort 1 for 72.5° W.L. and FlexPort 2 for 95° W.L.

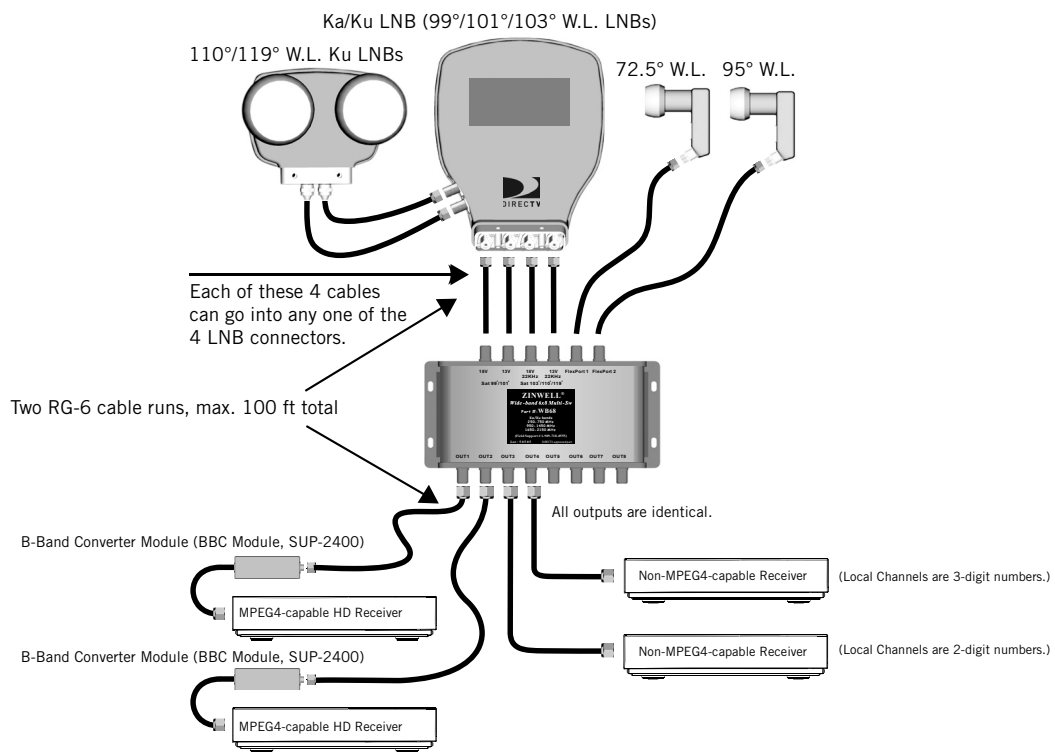
Do not diplex (combine) an off-air signal with a Ka/Ku dish signal, since the Ka-Lo band of 250-750 MHz occupies the same frequency band as the off-air signal and will cause interference.

### Important

**IMPORTANT:** This multi-switch should never be used in a system containing a Frequency Translation Module (FTM). The equivalent function of this multi-switch is already contained in the FTM. Combining this multi-switch with an FTM could result in your DIRECTV System not working. If you don't know whether you have an FTM installed, check with your installer or see the installation guide for your dish antenna.

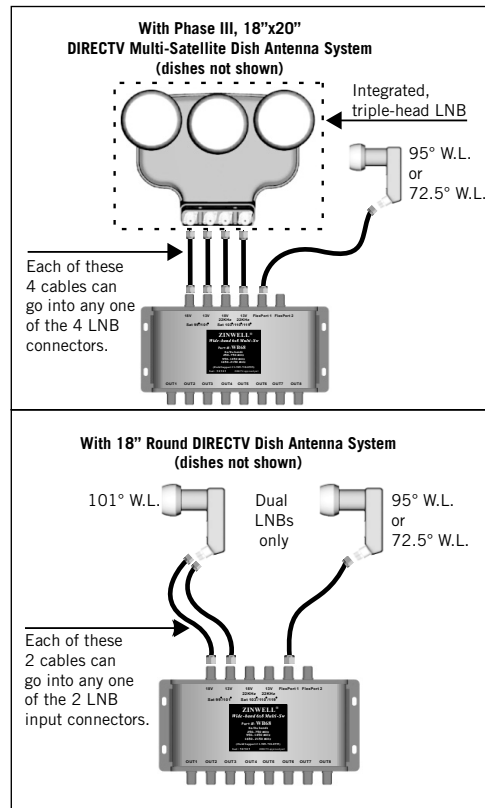
## Installing the WB68

(Ka/Ku dish not shown. Appearance of LNB may vary depending on brand.)



4

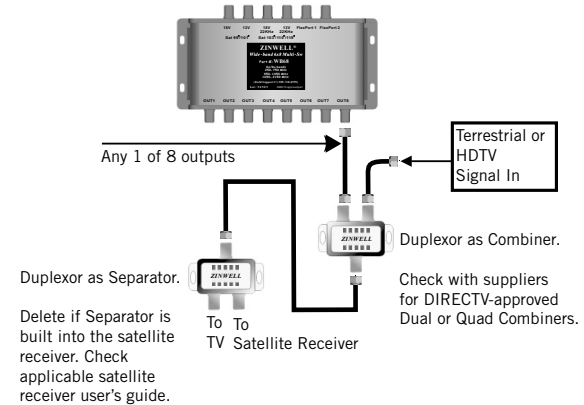
## Using the WB68 to replace SAM-6802 Narrowband 6x8 Multi-Switch



(Appearance of LNBS may vary depending on brand.)

### Low-loss Addition of Terrestrial HD Signal or Off-Air Signal to Satellite Signal (For Non-MPEG4-capable Receivers Only)

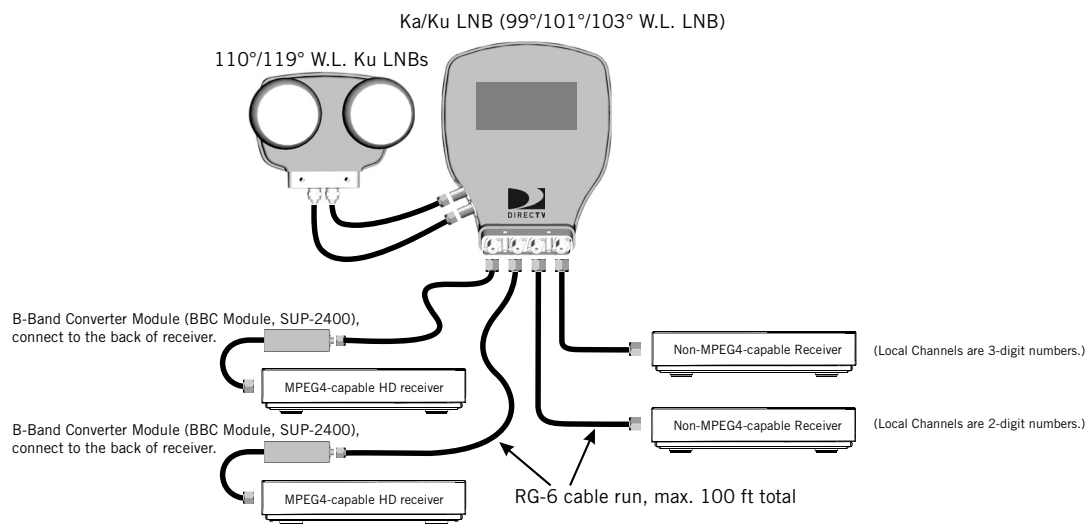
NOTE: Do not diplex off-air signals for H20/MPEG-4 capable HD receivers or BBC Modules when connected to a Ka/Ku Dish, since Ka-Lo band of 250-750 MHz occupies the same frequency range as the off-air signal.



## Connecting with no WB68 (Possible Existing Connection)

If you have an existing Ka/Ku Dish system for HD receivers, but are not presently using a WB68, this diagram shows what you are likely to have installed currently. Refer to the diagram on page 4 to see how your setup may have to change.

*(Dish not shown. Appearance of LNB may vary depending on brand.)*



©2005 DIRECTV, Inc.  
DIRECTV and the  
Cyclone Design logo  
are registered  
trademarks of  
DIRECTV, Inc.

Due to restrictions  
imposed by copyright  
holders, certain  
programming may  
include content  
protection measures  
that may restrict  
viewing in high  
definition and/or  
recording with certain  
consumer electronics  
equipment attached  
to the receiver.  
Please contact the  
manufacturer of  
such equipment for  
additional information.

Rev. 1.0 —  
WB68.050906