Hey, I’ve Got a Multi-Switch! Now what?
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.
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:

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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.)

Ka/Ku LNB (99°/101°/103° W.L. LNBs)
110°/119° W.L. Ku LNBs
72.5° W.L. 95° W.L.

Each of these 4 cables can go into any one of the 4 LNB connectors.

Two RG-6 cable runs, max. 100 ft total

B-Band Converter Module (BBC Module, SUP-2400)
All outputs are identical.

MPEG4-capable HD Receiver
Non-MPEG4-capable Receiver
(Local Channels are 3-digit numbers.)

Non-MPEG4-capable Receiver
(Local Channels are 2-digit numbers.)

(out4 out6 out7 out8)

DIRECTV-approved part
ZINWELL ®
Part #: WB68
Ka/Ku bands
250-750 MHz
950-1450 MHz
1650-2150 MHz

Sat 99 /101 Sat 103 /110 /119
18V 13V 18V 13V FlexPort 1 FlexPort 2

Lot : 50505
22KHz 22KHz
Using the WB68 to replace SAM-6802 Narrowband 6x8 Multi-Switch

With Phase III, 18"x20" DIRECTV Multi-Satellite Dish Antenna System (dishes not shown)

Each of these 4 cables can go into any one of the 4 LNB connectors.

With 18" Round DIRECTV Dish Antenna System (dishes not shown)

Each of these 2 cables can go into any one of the 2 LNB input connectors.

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 H2O/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.

(Appearance of LNBs may vary depending on brand.)
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.)

Ka/Ku LNB (99°/101°/103° W.L. LNB)

110°/119° W.L. Ku LN Bs

B-Band Converter Module (BBC Module, SUP-2400), connect to the back of receiver.

MPEG4-capable HD receiver

Non-MPEG4-capable Receiver

Non-MPEG4-capable Receiver

RG-6 cable run, max. 100 ft total