

Application Note

10/29/2015



Measuring Shaw Direct Signals after a CSS Switch using XR-3 Satellite Meter

Connections: After dish alignment is complete, connect coax cables from the Shaw Direct xKu LNBF's four output ports to the CSS Switch's four input ports. Connect a power inserter (wall wart AC to DC switching power supply) to the CSS Switch's 'DC' port. Connect a coax cable from a CSS multi-switch output port (i.e. port labeled 'CSS-6') to XR-3's ODU/LNB port. Any unused ports on the CSS Switch should be terminated with 75 Ohm terminators.

Meter set-up

Press the **SYST** System soft-key (located near top left corner of LCD screen) to enter the System Setup menu. Then select the following:

- REGION your geographic region
- SERVICE **Shaw Direct**
- SYSTEM **xKu w/CSS**
- LNB MODEL select one of the following user bands (see important notes below before selecting):
 - User Band 1
 - User Band 2
 - User Band 3
 - User Band 4
 - User Band 5
 - User Band 6
- SWITCH TYPE **CSS**

*To make selections, press up/down arrow keys to scroll to the item to change and press **Enter**.*

*Press **EXIT** or **DONE** to return to Run Mode*

Important Notes about the Shaw Direct CSS Switch and User Bands:

When you select a user band, the XR-3 meter will determine the appropriate L-band frequency to tune to. If you're installing a new Shaw Direct CSS system and no receivers have been connected to the system yet, then it doesn't matter which user band you select on the meter. If you're troubleshooting an existing Shaw Direct CSS system, then check which user band the Shaw Direct receiver is using (by referring to the TV that's connected to the receiver). Then disconnect the receiver and select the same user band on the meter.

If another receiver is on the system using this same user band, the meter will confuse the receiver and vice-versa.

Basically, they will fight over satellite and transponder selections, last command wins.

If you don't know if another receiver is using the system you can try this:

1. Disconnect the coax cable from the XR-3 meter
2. Turn the XR-3 meter on and select a user band
3. Go to the main Run screen where your bar graphs are shown
4. Connect the coax cable from the top (Signal In) port of XR-3 to a CSS Switch output port, but **DO NOT** press the LNB soft-key to send voltage and switch commands from the meter.
5. Check if a signal level is being displayed on the meter's left bar graph.
6. If a signal level IS shown it means either that another receiver is using that band OR that a receiver was using it and did not turn it off properly.
7. If a signal level is NOT shown, it means that user band is safe to use.

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8. To check another band, disconnect the cable, then go back to step 2.

Note that if a signal level is shown, it does not necessarily mean the band is being used. It could be it wasn't turned off properly. This will happen if you just pull the cable.

With the meter, once you have turned LNB power on, you should use the LNB soft-key to turn it off again. If you just pull the cable or turn off the meter, it won't send the command to shut down the user band.

Once you have the user band selected, you should also turn the meter on BEFORE connecting the cable. When the meter is first turned on, it tries to send a command to turn off the LNB. If another receiver is using the same band that the meter is configured for, this will shut off the signal to the receiver. It also sends the off command when you exit the system selection screens.

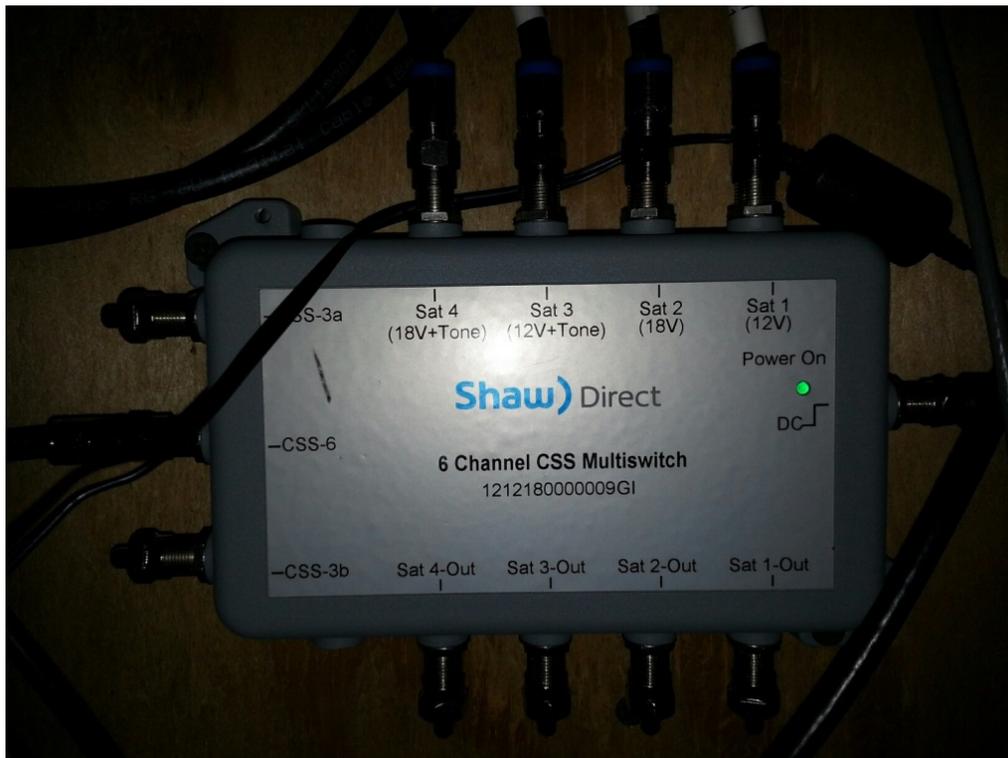
Run Mode (while user is viewing main Run screen with two bar graphs)

- Press **LNB** soft-key once (located near middle right side of LCD screen) to send voltage and switch commands from the meter.

LNB1 = 107.3W (Anik G1 and Anik F1R)

After pressing the **LNB** soft-key to send voltage and switch command:

- 1) Confirm appropriate signal level (left bar graph), signal quality (right bar graph), and LOCK status.
- 2) Press the **ID** soft-key to verify the satellite. "ID VERIFIED" means you are pointed correctly.
- 3) If "ID FAILED" is displayed, press **SCAN** soft-key and XR-3 will find which satellite you are aimed at.
- 4) If desired, you may also use Up/Down arrow keys to scroll through other transponders to check for proper signal level and quality.
- 5) Press **LNB** soft-key again (located near middle right side of LCD screen) to view signals from the Anik F2 satellite. LNB2 = 111.1W (Anik F2)
- 6) Confirm appropriate signal level (left bar graph), signal quality (right bar graph), LOCK status, and ID verification on the Anik F2 satellite (111.1W).



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