

1. Preparation

- Ensure SBSM is charged
- Review the account notes
- Status the customer

2. Customer Confirmation

- Bring SBSM when greeting the customer
 - "I understand you are having an issue with _____. Can you show me where you are having this issue?"
- Ask probing questions such as:
 - "Is the issue on all TVs or just one TV?"
 - "Is the issue constant or intermittent?"
 - "Have you recently moved/relocated the system?"

3. Initial Troubleshooting With Customer

- Attempt to recreate the problem (if possible)

At both TV1 and TV2:

- Check all devices are plugged in and turned on
- Check all cables are properly secured
- Check the TV is on the correct input/channel
- If applicable, check that the smart card is inserted properly

If receiver is operational:

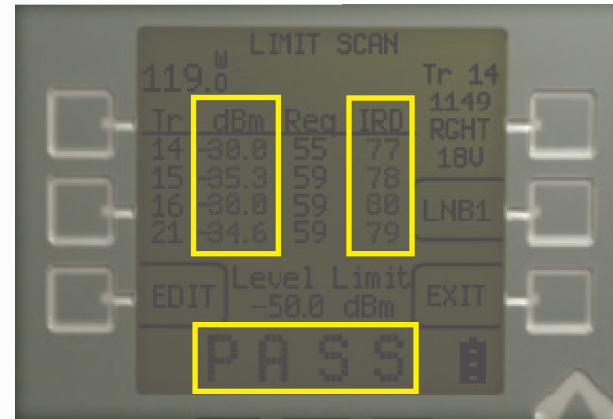
- Check the remote is programmed properly (codes, address, etc)
- Check the remote and receiver are communicating properly
- Check the system info screen for errors

4. Set up Limited Scan

- Unplug the receiver from the power outlet
- Power on the SBSM
- Set SBSM configuration to match the dish/switch configuration
- Unhook the satellite feed from the receiver
- Attach the SBSM to the satellite feed

5. Limited Scan Behind the STB With Customer

- On the SBSM, press MENU and then press Limit Scan
- Press LNB OFF soft key to cycle through orbitals
- Look for a PASS or FAIL



FAIL

A failed limited scan will occur if:

- at least one transponder's IRD is less than the Req
- at least one transponder is less than -50.0 dBm

Inform the customer:

"There seems to be an issue with the signal path. I will do further tests and will let you know once the issue is resolved."

Go to step 6a.

PASS

A passed limited scan will occur if:

- all transponders the IRD is greater than the Req
- all transponders the dBm is greater than -50.0 dBm

This means the issue is isolated between the STB and TV

Inform the customer:

"The signal strength is good and the issue seems to be isolated to this area. I will do further tests and will let you know once the issue is resolved."

Go to step 6b.

6a. Signal Troubleshooting

STEPS	FAIL	PASS
a. Does the wall plate have a low frequency barrel in it?	Replace and retest	Next step
b. Limited scan at STB side of ground block/switch	Next step	Check and replace any defective components between ground block/switch and STB. Then go to (f)
c. Limited scan at dish side of ground block/switch	Next step	Replace ground block/switch. Then go to (f)
d. Limited scan at dish	Next step	Check and replace any defective components between dish and ground block/switch. Then go to (f)
e. Verify mount is secure and positioned properly	Secure and peak dish	Replace LNBF. Then go to (f)
f. Repeat limited scan behind STB	Continue with last step completed	Go to (g)
g. Test outlet, plug receiver in, and run a check switch	Go to Step 6b - (a)	Go to (h)
h. (If applicable) Perform a limited scan behind all other STB's. If no other STBs, continue to Step 7 - Final Quick Checks	Go to Step 6a - (a)	Go to Step 7 - Final Quick Checks

6b. STB to TV Troubleshooting

STEPS	FAIL	PASS
a. Run limited scan around each component (ex. diplexer, separator, or triplexer)	Replace any defective components. Reconnect components and go to (h)	Reconnect coax and go to next step <small>*A diplexer/triplexer will only show odd or even transponders, which will display "fail" on SBSM</small>
b. Test outlet, plug receiver in, and see if the TV picture is coming in clear and consistent	Go to (d)	Go to (c)
c. TV picture contains no error message	Address error message and if needed, replace the receiver	Go to (i)
d. Try using the same cable in a different port on the TV	Next step	Use same cable in the different port. Then go to (i)
e. Try using a replacement cable	Next step	Use replacement cable. Then go to (i)
f. Try using a different kind of cable connection (ex. If connected with HDMI, try using component cable)	Next step	Use new cable connection. Then go to (i)
g. (With customer approval) Reset the TV's factory settings	Next step	Go to (i)
h. (If possible) Plug in another device into the same port on TV	Possible TV issue, test on another TV	Replace the receiver. Then go to (i)
i. (If applicable) Perform a limited scan behind all other STB's. If no other STBs, continue to Step 7 - Final Quick Checks	Go to Step 6a - (a)	Go to Step 7 - Final Quick Checks

7. Final Quick Checks

Dish and mount

- Clear line of sight
- Secure mount & lags
- Enough lag bolts
- Plumb mast
- Grounded mast

Cabling & components

- Cable is DNS approved, RG-6 and in good condition
- DNS approved hardware
- All fittings secure and torqued
- Drip loops installed properly

Grounding

- Approved ground block
- Approved ground source
- Grounding component installed properly

Connectivity & Customer Education

- Verify connectivity is present and functioning
- Review troubleshooting findings with customer
- Ensure customer is confident with system/remote
- Review and quiz on 5 troubleshooting steps