



CT-4 Quick Verify with ONX

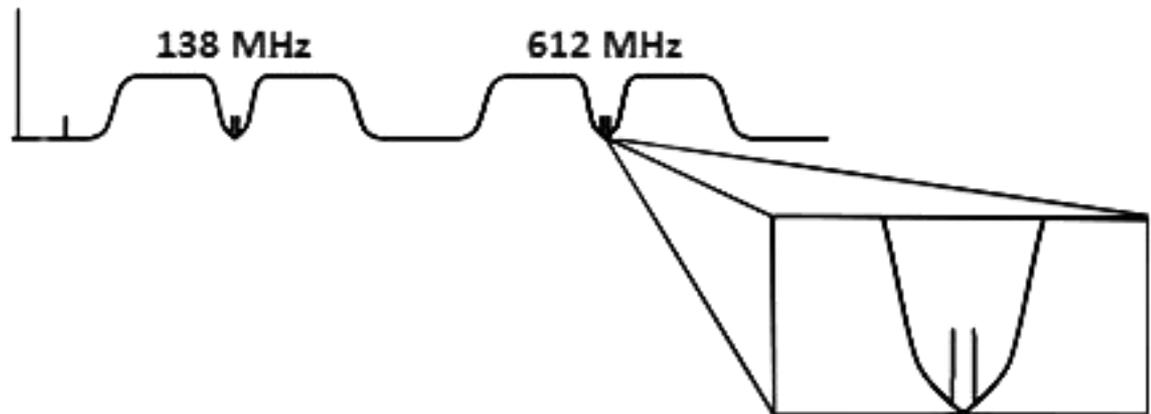
Date 3/16/2020

Purpose

Determine Estimated CT-4 Levels

Quick ballpark verification of CT-4 levels without going to the headend

- This procedure is not to be used to set or adjust the CT-4 levels
 - This procedure does not produce precise measurements of the Dual CW carriers
- This is to determine if a ticket needs to be entered to schedule ISP to adjust the CT-4 levels in the headend
 - Precise measurements done in the headend allows the ISP tech to setup a -30 dBc relationship between the Viavi dual CW's and the adjacent QAM carriers



Procedure

- Measure adjacent QAM Channels to 612 MHz and 138 MHz
 - Ch. 88 or 89, and 16 or 17 respectively
 - Log channel power levels for each
- Measure the peak value of the dual CW's combined (Not in Low-Res mode)
 - 612 MHz and 138 MHz
 - Log peak value of both frequencies

Proper Levels, no action required

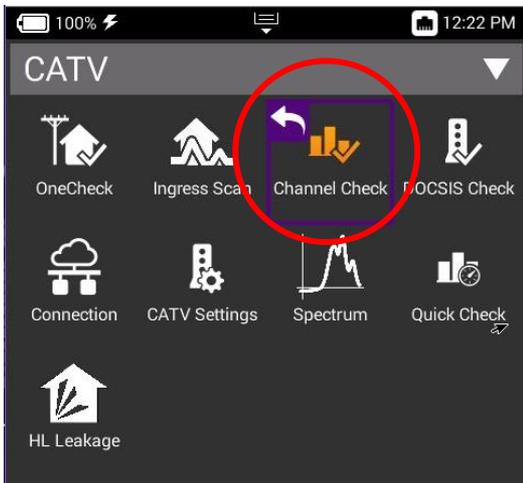
- Ch 88 or 89 power level -24 dBc to -25 dBc = acceptable level
- Ch 16 or 17 power level -24 dBc to -25 dBc = acceptable level

If any of the above is not true, schedule headend visit

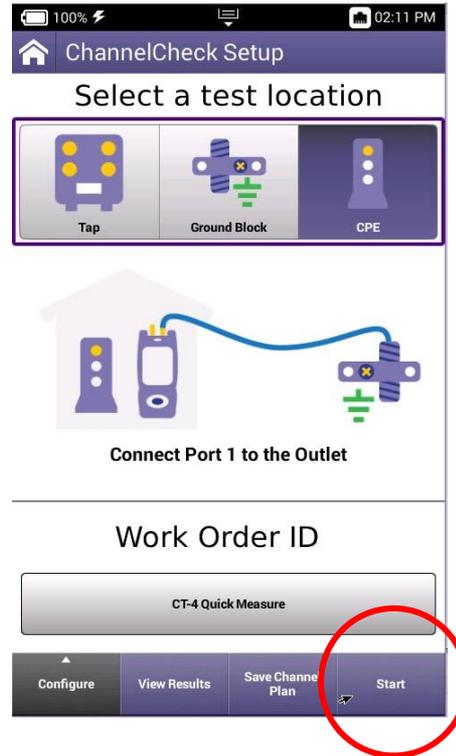
Graphical step by step process to follow

Procedure

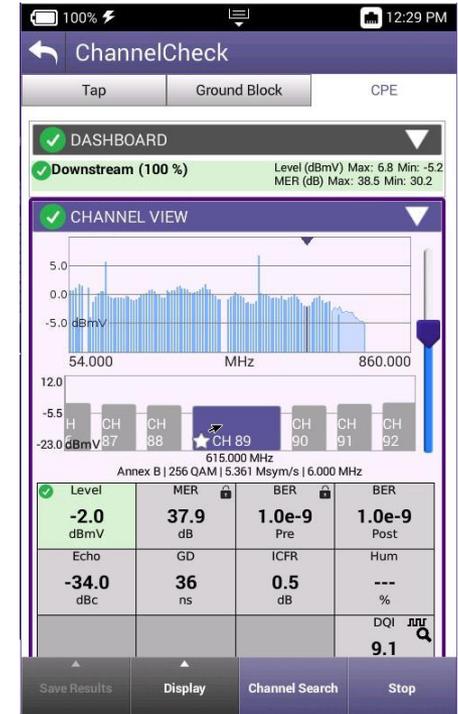
Connect signal to port 1 of the ONX



CATV Home Screen
select
“Channel Check”

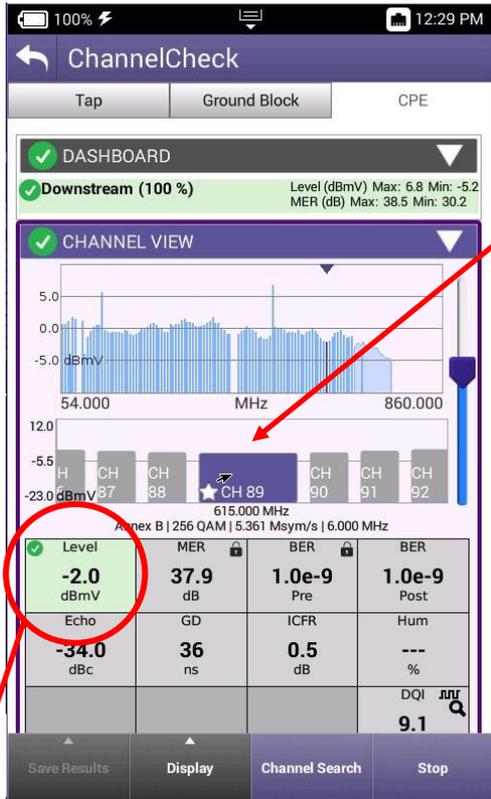


Channel Check Setup
select
“Start”



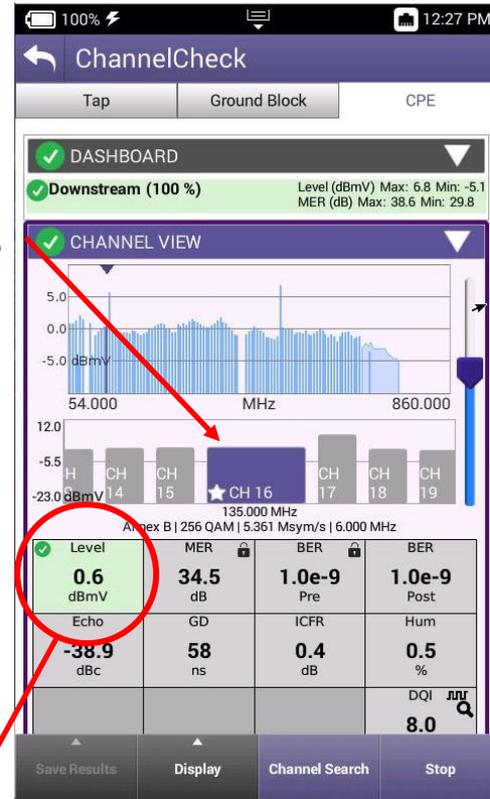
ONX builds channel plan
provides measurement for
all channels in the plan

Procedure



Select Channels

Ch 88 or Ch 89
and
Ch 16 or Ch 17
Log Levels



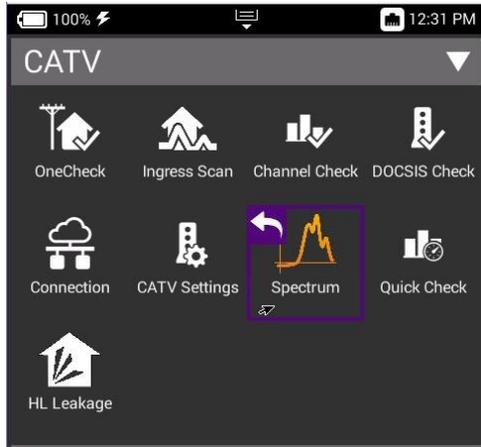
$$-2.0 \text{ dBmV} - 24 \text{ dBmV} = \underline{-26 \text{ dBmV}}$$

$$0.6 \text{ dBmV} - 24 \text{ dBmV} = \underline{-23.4 \text{ dBmV}}$$

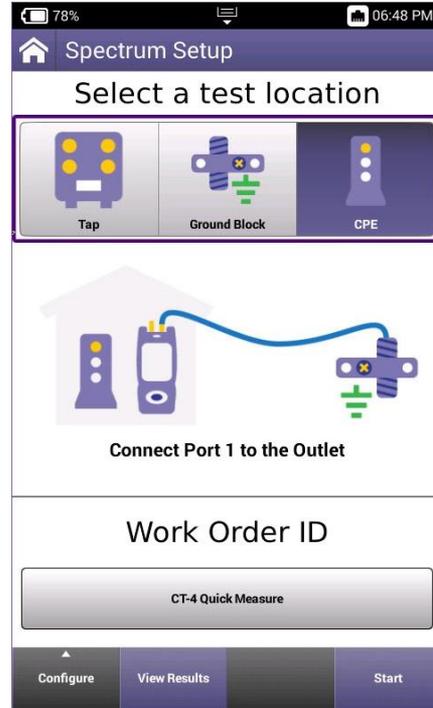
Approximate Target Levels

Downstream Spectrum Setup

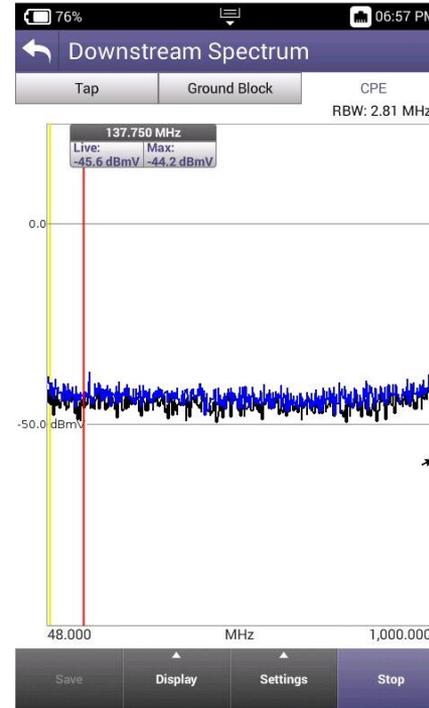
(612 MHz)



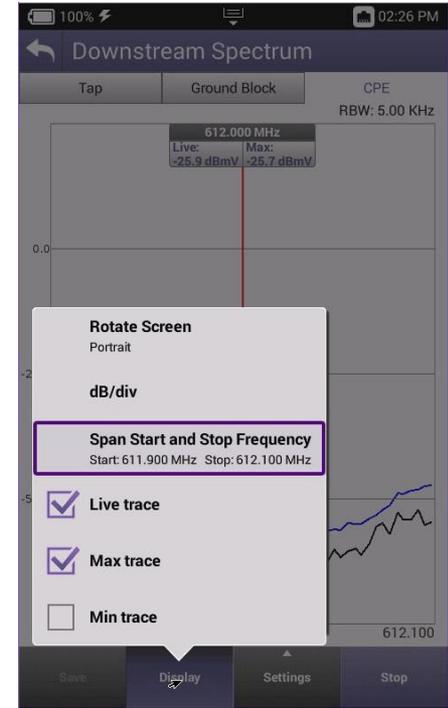
CATV Home Screen
select
“Spectrum”



Spectrum Setup
select
“Start”



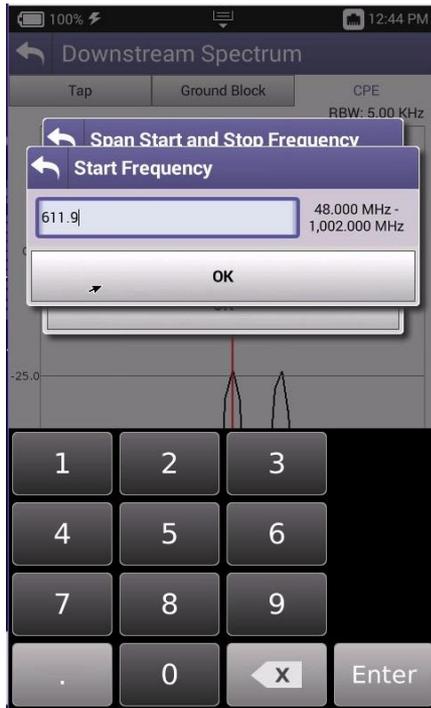
Spectrum
select
“Display”



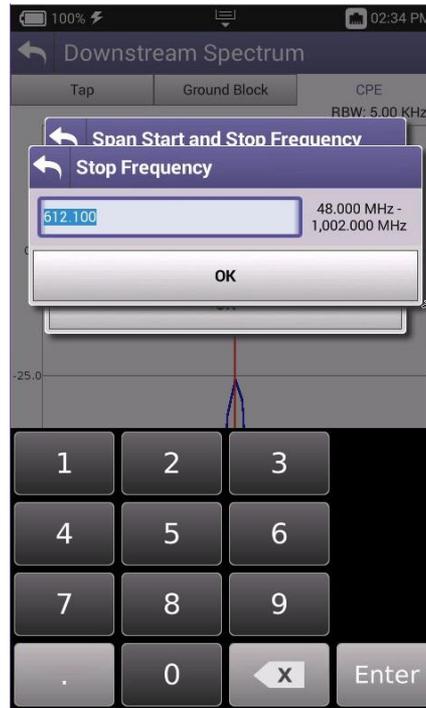
Enter
Start and Stop
Frequencies

Downstream Spectrum Setup

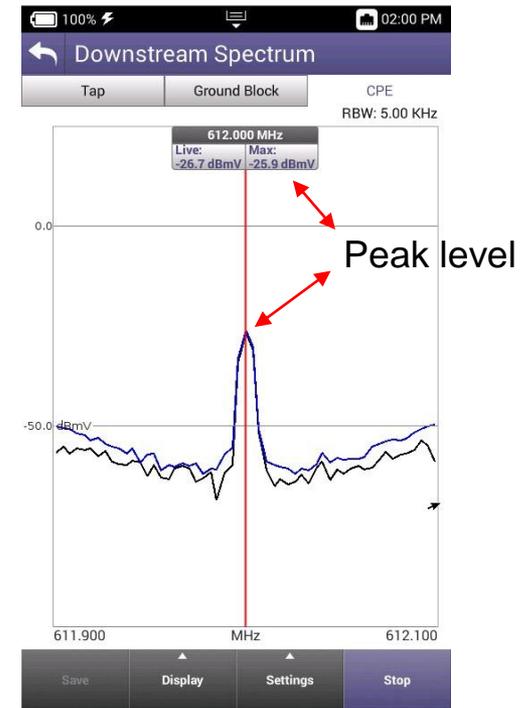
(612 MHz)



Enter Start Freq
611.9 MHz



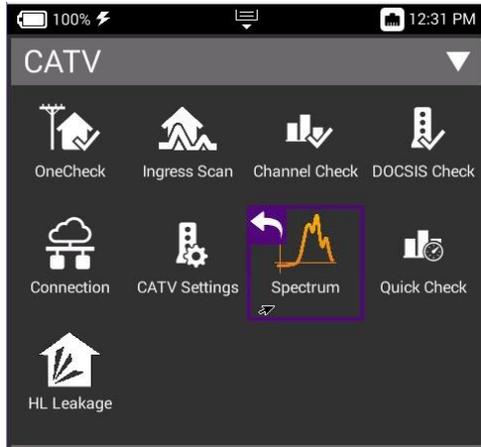
Enter Stop Freq
612.1 MHz



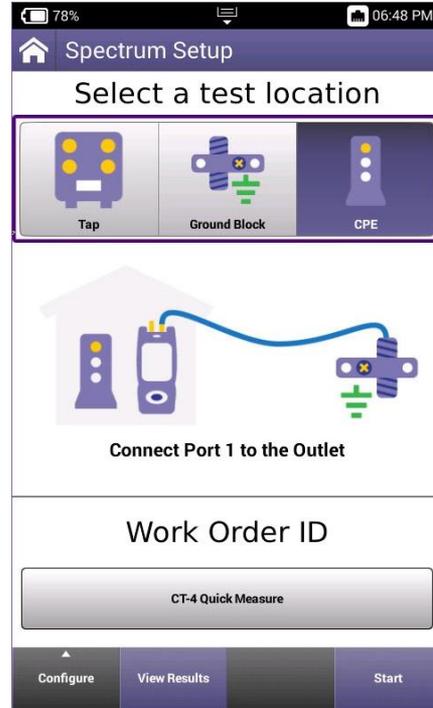
Move Marker
to
Peak Level

Downstream Spectrum Setup

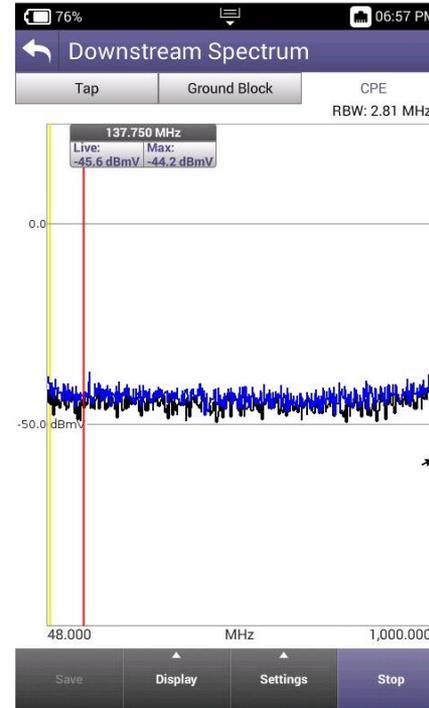
(138 MHz)



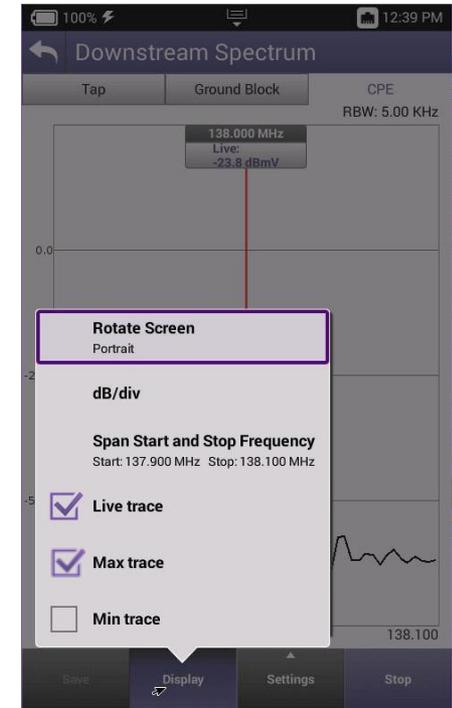
CATV Home Screen
select
“Spectrum”



Spectrum Setup
select
“Start”



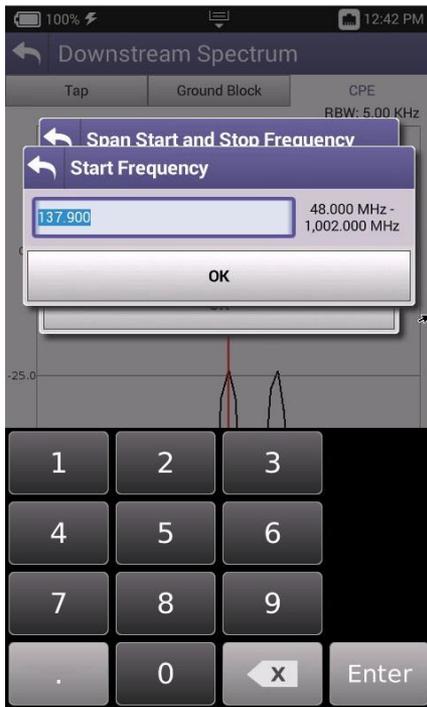
Spectrum
select
“Display”



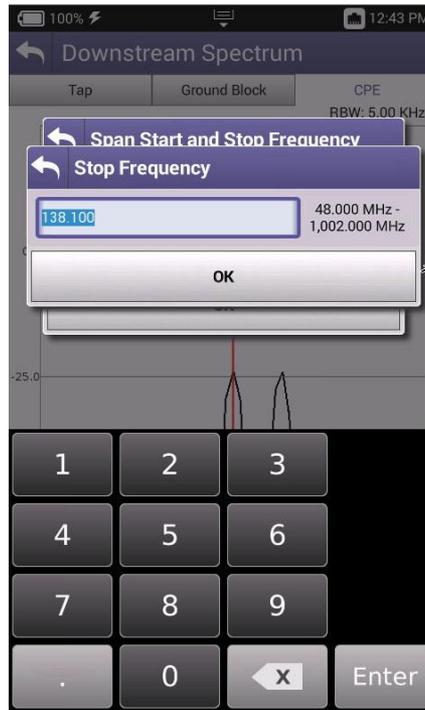
Enter
Start and **Stop**
Frequencies

Downstream Spectrum Setup

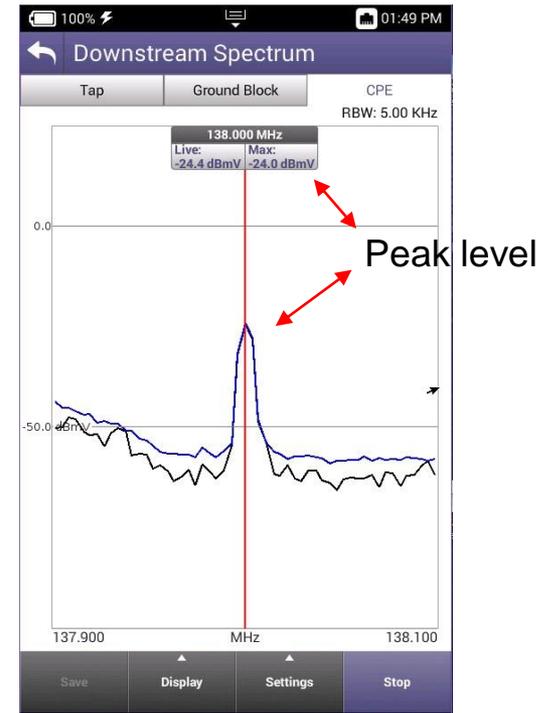
(138 MHz)



Enter Start Freq
137.9 MHz



Enter Stop Freq
138.1 MHz



Move Marker
to
Peak Level

Measurement Results

Target Levels from Slide 3

High Band Target Range

-2.0 dBmV - 24 dBmV = -26 dBmV

-2.0 dBmV - 25 dBmV = -27 dBmV



This looks good
No action required

Low Band Target Range

0.6 dBmV - 24 dBmV = -23.4 dBmV

0.6 dBmV - 25 dBmV = -24.4 dBmV



This looks good
No action required

Remember: These are ballpark measurements of the dual CW's
Readings within a couple tenths of these ranges would be acceptable

מילא