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# **TRT Guide**

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### Introduction

#### **1** Introduction



The TRT screen is where you can run Tone and Reflector Tests, specifically for use on the mobile while building a network.

This Guide assists you on the parameters available on the TRT screen.

#### 2 TRT

Select the required Reflector Test, Reflector Ref or Tone Test tab.

#### 2.1 Reflector Test

The Reflector Test is a handy tool to use while building out your network.

The process is to place a reflector on a leg of the splitter being installed, then test each CBT that is connected to each leg of the Splitter.

- 1. Select the **POP** where the route to be tested originates.
- 2. Select the Route to be tested, using the desired filters to navigate to it.

Reflector Test	Reflector Ref Tone Test		
		2	
		POP: ORLE-POP 01 - ORLE	~
	* F	Route: Please Select a Route:	~
	Route	Type: No Route Type Filter	~
	In Se	rvice:	

Reflector Test	i i		
Reflector Test	Reflector Ref Tone Test		
	* POP:	ORLE-POP 01 - ORLE	~
	* Route:	Please Select a Route:	This field is required
	Route Type:	Please Select a Route: SW001:001 [SW001:001] SW001:002 [SW001:002]	
	In Service:	SW001:003 [SW001:003] SW001:004 [SW001:004]	
		SW001:009 [SW001:009] By Name	
		By CBT	
		By OLT	
		O By Switch	
		By Fibre	
		By Route Type	
		By Splitter	

- 3. Once the route selected the page navigates to the test items screen. If there are CBT's already connected to the Splitter they will be on display.
- 4. Clicking on the **Splitter** row will navigate to the test screen, using the splitter as a starting point in the test and diagnostics.

[The result will be displayed as a distance and loss to the (intentional) reflection]

	CBT / Splitter	Back
2	Route:	SW001:004
<b>м</b> н		
A A	Splitter	
<u>1</u>		

5. Select Test to start the process.

	Run Test	List Test Back
-		
<b>М</b> Н	Route: Component: Testing:	SW001:004 Splitter 0 / 1
A A		
T		
E		
M N		Test in progress
R R		
		Cancel
<b>F</b> TRT		

- 6. The **result** is displayed as a **distance and loss** to the (intentional) reflection.
- It will be a *Pass* if the dB loss is under the desired value.
- 7. Select **Next Test** to resume the process if anymore ports are available in route to test.

ш	Run Test				List Test Back
-		Route:	SW001:001		
н н		Component: Testing:	Splitter		
À					
<b>™</b> T	3266.74			Loss (dB) 28.91	
E	Finish ReTest				
۲					

- 8. The tester can go back to the start page at any point by selecting **Back**, and any point in the process can be selected to test.
- 9. Select **Finish** when the process of testing all ports is complete.
- 10. List Test button will pop up the details about the Tests run on that particular route, in order to confirm which port the last reflector test was run.

11. The test will be a *Fail* if the dB loss is over the desired value.

Ш	Run Test				List Test Back
-		Parte	014/004-004		
<b>е</b> н		Component: Testing:	SW001:004 Splitter		
A A					
₩ T	Distance (m) 1109.18			Loss (dB) 32.12	
E	Finish ReTest				

#### 2.2 Reflector Ref

To use the Auto-assignment feature there is a test work flow to be followed. Don't connect your reflector yet.

When you do a reflector test, the system will capture the assignment between the distance to the new reflector and the unique name of the network component where the reflector has been plugged in.

The measurement depends on comparing two results:

- a test measurement with the reflector in place and
- a reference measurement without the reflector

A reflector test identifies a large new reflection which was not present in the reference measurement and has appeared in the test measurement.

- 1. Select the **POP** where the route to be tested originates.
- 2. Select the **Route** to be tested, using the desired **filters** to navigate to it. In this example we are searching by *Splitter*, and *no Route Type*.

	Reflector Re	f						Export
<u> </u>	Reflector Test	Reflector Ref	Tone Test					
<b>А</b> н			*	POP:	ORLE-POP 01 - ORLE	v		
A A			* F	Route:	001-DP-01-01-1:8 [SW001:001]			
T.			Route In Se	Type: rvice:	No Route Type Filter	~		
E					Reflector Ref			
<b>₩</b>					By Name			
R R					By OLT			
					By Fibre			
<b>F</b> TRT					By Route Type By Splitter			

- 3. Select the **Reflector Ref** to initiate the reference base line reading.
- 4. Once the reference is finished, then connect your reflector at the chosen location in the network.

In many cases, this will be an output port of a DP.

- 5. Select the network location where the Reflector has been connected to and run a Reflector Test.
- 6. The result will give a Pass or Fail dependent on the network loss from start to the DP selected. Either the network loss is less than or more than the configured threshold (ie: 29.5dB).
- 7. The DP selected will now have an assigned distance due to the event assignment.

An "event assignment" is a relationship, stored in the system database, between a network component and the distance to its associated reflection in the OTDR trace. The network component is identified by its unique name.

8. Work through each DP splitter.

Patch a port of the required DP test splitter to the DP splitter connector at each output. Select the DP splitter in the reflector test drop down, and tap "REFLECTOR TEST". When the test completes, disconnect the patch.

#### 2.3 Tone Test

The Tone Test is a handy tool to use while building out your network. There is a choice of standard frequencies to choose from. The default test time is 10 seconds, at 1kHz, and can be modified in System Properties.

The OTDR produces the tines, and the user will need to clamp a handhold 'Optical Fibre Detector' to a fibre on the chosen network .

- 1. Select the **POP** where the route to be tested originates.
- Select the Route to be tested, using the desired filters to navigate to it. In this example we are searching by Name, and Unused Route Type.



	Tone Test						Export
<b>_</b>	Reflector Test	Reflector Ref	Tone Test				
<b>А</b> Н				* POP:	ORLE-POP 01 - ORLE		
A A				* Route:	Please Select a Route: ( Please Select a Route:	v	This field is required
<mark>™</mark> T				Route Type:	Area 2 [Area 2] Area 3 [Area 3]		
E				in service.	Tone Test 270 Hz		
<b>⊕</b> M					O By Name By CBT		

- 3. Once the route selected the test button becomes available.
- 4. Click on the **Tone Test** button, or drop down to choose another frequency. Either will kick off a test.

Ш	Tone Test					Export
-	Reflector Test Reflector Ref	one Test				
н		* POP:	ORLE-POP 01 - ORI	.E		
A A		* Route:	Area 2 [Area 2]		~	
<b>₩</b> T		Route Type:	Unused		~	
E		in service.	Tone Test 270 Hz	•		
<b>⊕</b> M			O By Name	270 Hz 330 Hz		
R R			By OLT	1 kHz 2 kHz		
			By Switch	3 kHz		
<b>F</b> TRT			<ul> <li>By Route Type</li> <li>By Splitter</li> </ul>			

	Tone Test	Export
-	Reflector Test Reflector Ref Tone Test	
<b>Ж</b> Н		* POP: ORLE-POP 01 - ORLE
A		Route: Area 2 [Area 2]
<b>⊷</b> ⊤	Rout	a Type: Unused
E E		Tone Test 1 KHz •
<b>⊕</b> м		O By Name 1 kHz Tone (1650nm) applied for 20s
R R		
		By Fibre Cancel
<b>9</b> TRT		By Route Type           By Splitter

Once the Tone has stopped, an OK message is presented on a banner and the screen will be available.



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