View Net Cable Testing Procedure

Scope

Testing of all coaxial cable trunk lines and fiber optic cable field terminations for base functionality. This is intended to make sure the BNC connections were properly installed, and the fiber optic fusion splices are correct according to color chart and crossover requirements.

NOTE: This does not include commissioning tests through View components or fiber optic performance tests such as link/loss reports done with OLTS and OTDR tools. These tests are performed during commissioning of system.

Work Performed by

Low-Voltage Electrical Contractor

Tools Required

1. View Net Test Kit (provided by View)
2. Tools provided by installer includes but not limited to the following:
   - Digital Voltmeter, Coaxial cable tester, fiber optic cable tester

View Net Test Kit Includes

1. Tablet with cellular data plan. Smartsheets application already downloaded
2. Documentation includes guidelines and procedures

Getting Started: Conduct 24 hours before testing

1. Charge the Tablet
2. Confirm Smartsheet login credentials using the Tablet (Contact View Project Manager / Project Engineer for login credentials)

I. Overview

1. Confirm the iPad is connected to the Internet

2. Low-Voltage Contactor to receive from View PM the correct link for testing View hardware and cabling for each floor of the project

    • Testing Coaxial Cable Trunk Lines

    • Visual test: Verifying Fiber Optic Cable Terminations

    • Test Tool: Fiber cassette cable: Using installer provided equipment

3. Low-Voltage Contractor:

    • Turn On tablet

    • Launch Smartsheet app

    • Sign-in using the login credentials submitted to View (Smartsheet account was set-up by View per your company's submission of email/password. NOTE: Change password)

4. Using SmartSheet, conduct cable testing

5. Save work in Smartsheet before shutting down tablet

6. Notify View PM when testing is complete

7. At completion of project, ship via FedEx ONLY the View Net Test Kit. Coordinate with View PM for FedEx account number and ship to address. Insurance of $2,500 MUST be included when returning the View Net Test Kit. A backcharge will be issued if the equipment is not returned in good working condition.

II. Testing Coaxial Cable Trunk Lines

1. Login to Smartsheet to access the testing sheets
2. Go to folder: BNC Testing
3. Select the BNC testing sheet which matches the floor to the Control Panel being tested
   - Each sheet is pre-populated with the Control Panel designation: a) Trunk Port and b) Trunk name
4. Conduct Continuity Test: Use a DVM or equivalent tool and record PASS or FAIL
5. Inspect Quality of BNC connections: Record Pass or FAIL
6. Enter Technician Name
7. Enter Technician Email
8. Enter Company Name
9. Enter notes and photos
10. Repeat for all trunk line connections
11. Repeat for the remaining Control Panels on the floor
12. Repeat steps above for each additional floor
13. Save work frequently while conducting test
14. Notify View PM when testing is complete

III. Verifying Fiber Optic Cable Terminations - OUTBOUND

1. Login to Smartsheet to access the testing sheets
2. Go to folder: Fiber Cassette Testing
3. Select the Fiber Cassette testing sheet for VISUAL OUTBOUND FIBER TEST
4. For each Control Panel Number, conduct the following:
   - Enter CP Location: Floor Number
   - Enter Slot location in Fiber Cassette Drawer: (A-D, 1-4)
5. Visually verify matching colors for each strand in the splice cassette using the Fusion Splice Color Chart
6. Enter Technician Name
7. Enter Technician Email
8. Enter Company Name
9. Enter notes and photos
10. Repeat steps 1-9 for all OUTBOUND cassette locations
11. Save work frequently while conducting test
12. Notify View PM when testing is complete

NOTES:
a. Refer to Fusion Splice Color Chart: The nomenclature is referenced in the View Interconnect drawings.
b. For a fiber run between floors or Control Panels on the same floor, the lower designation is the Outbound and the higher designation is the Inbound. The only exception is the backbone whereby the top floor will be Outbound and bottom floor will be Inbound to create the redundancy.

IV. Verifying Fiber Optic Cable Terminations - INBOUND

1. Login to Smartsheet to access the testing sheets.

2. Go to folder: Fiber Cassette Testing

3. Select sheet name, Fiber Cassette testing, for VISUAL INBOUND FIBER TEST

4. For each Control Panel Number, conduct the following:

   • Enter CP Location: Floor Number

   • Enter Slot location in Fiber Cassette Drawer: (A-D, 1-4)

5. Visually verify crossover colors for each strand in the splice cassette using the Fusion Splice Color Chart

6. Enter Technician Name

7. Enter Technician email

8. Enter Company Name

9. Enter notes and photos

10. Repeat steps 1-9 for all INBOUND cassette locations

11. Save work frequently while conducting test

12. Notify View PM when testing is complete

NOTES:

   a. Refer to Fusion Splice Color Chart: The nomenclature is referenced in the View Interconnect drawings.

   b. For a fiber run between floors or Control Panels on the same floor, the lower designation is the Outbound and the higher designation is the Inbound. The only exception is the backbone whereby the top floor will be Outbound and bottom floor will be Inbound to create the redundancy.

V. Testing Fiber Optic Cable Termination

1. Login to Smartsheet to access the testing sheets.

2. Go to folder: Fiber Cassette Testing

3. Select Sheet Name: Fiber Test Using Test Tool

4. Find the column name, Test: Outbound-to-Inbound and go to the row for the fiber run to test

5. Enter Outbound CP Floor Location

6. Enter Outbound Slot Location

7. Enter Inbound CP Floor Location

8. Enter Inbound Slot Location

9. Conduct test for each strand: Strand 1 to 12

   • Record PASS or FAIL

      NOTE: This test only verifies proper pathway from Outbound cassette to Inbound cassette. This test should verify that the crossover is correct between the two cassettes. Example: Port 1 (Blue) on Outbound cassette is tested to Port 2 (Orange) on Inbound cassette. Port 2 (Orange) on Outbound cassette is tested to Port 1 (Blue) on Inbound cassette.

10. Enter Technician Name

11. Enter Technician Email

12. Enter Company Name

13. Enter notes and photos

14. Repeat for all fusion splice connections

15. Enter notes and photos

16. Repeat steps 1-15 for all OUTBOUND/INBOUND fiber terminations

17. Save work frequently while conducting test

18. Notify View PM when testing is complete

NOTES:

a. Do not look directly into a fiber optic cable with a LED emitting tool connected to one of the ends. This will cause damage and injury to the eye.

b. This test is only to verify that the fusion splice is terminated correctly on the outbound and inbound fiber splice cassettes. It does not verify data transmission across the Fiber Optic cable.

c. Refer to Fusion Splice Color Chart: The nomenclature can also be referenced in the View Interconnect drawings. For a fiber run between floors or Control Panels on the same floor, the lower designation is the Outbound and the higher designation is the Inbound. The only exception is the backbone whereby the top floor will be Outbound and bottom floor will be Inbound to create the redundancy.

VI. Fusion Splice Color Chart

FUSION SPLICE POINT

1	BLUE			BLUE	1
2	ORANGE			ORANGE	2
3	GREEN			GREEN	3
4	BROWN			BROWN	4
5	SLATE			SLATE	5
6	WHITE			WHITE	6
7	RED			RED	7
8	BLACK			BLACK	8
9	YELLOW			YELLOW	9
10	VIOLET			VIOLET	10
11	ROSE			ROSE	11
12	AQUA			AQUA	12

OUTBOUND FIBER CASSETTE

INBOUND FIBER CASSETTE