INSTRUCTION/INSTALLATION SHEET
Network Centers

301 Fulling Mill Road, Suite G
Middletown, PA 17057
Phone (800) 321-2343 / Fax (717) 702-2546
www.onqlegrand.com

IS-0141 REV. B

1. Introduction

The On-Q/Legrand Basic Network Center, Universal Network Center and Advanced Network Center (see ***Figure 1***) provide a convenient method for installing structured wiring in many residential applications. The Universal and Advanced Network Centers provide space for installation of On-Q Service Center modules for other applications such as networking, home office, audio and advanced video applications.

2. Description

The network centers combine both video and telecom applications. The "video" portion has vertical access "F" style fittings for connecting incoming and outgoing cables.

NOTE – Video portion comes in several versions; refer to *Table 1* for insertion losses.

The "telecom" portion is also available in several versions. All telecoms have an 8 position 110 punch-down connector for incoming 4 line service and 110 (8) position punch-down connectors for the extension connections

Some modules also have an RJ-31X security interface jack. The base plates and covers are constructed of powder coated steel. The base plates incorporate a grounding screw. The Basic Network Center is seven (7) inches wide by twelve (12) inches long. The Universal and Advanced Network Centers are seven (7) inches wide by nineteen (19) inches long. The Universal Network Service Center can be used in combination with any On-Q half-width modules for complete application flexibility.

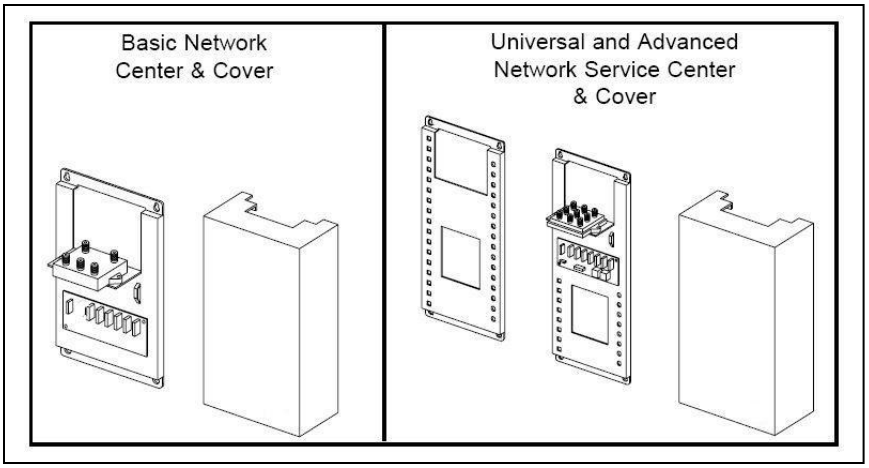

Figure 1

Table 1

	BANDWIDTH MHz:	5-40	40-400	400-600	600-1000
4-WAY SPLITTER:	INSERTION LOSS: (dB Max.)	6.5	7	7	8
6-WAY SPLITTER:	INSERTION LOSS: (dB Max.)	9	9	10	11
8-WAY SPLITTER:	INSERTION LOSS: (dB Max.)	10	11	11	13

3. Installation

A. Locating the Network Center
   1) The network center should be located in a space which will remain between 0°C (32°F) and 50°C (122°F) and not be subject to humidity levels which will allow condensation on the product. Areas of excess dust and dirt must also be avoided.
   2) The network center location must be such that it can be easily accessed to check and test connections.
   3) The network center should be located within two (2) feet of a standard 110 VAC outlet. The outlet should always be on and available for use by upgrades to the network center.

B. Cable Rough-In
   1) The cabling to and from the network center can either be surface run or behind the wall. To run the cable behind the wall, install a double gang mud ring or junction box one (1) inch below the top of the network center.
   2) Follow NEC and local code requirement in running cables from the network center to the outlet locations.
   3) Route cables from the network center location to the outlet locations throughout the home.

   NOTE: It is recommended to use Category 5e for telephone and data network wiring and quad shield RG6 coax for video distribution.

   NOTE: Avoid kinks and sharp bend radii in routing cable. At corners, feed cable round the corner. Cable should be routed to feed easily. If cable is hard to pull, locate the area where it is bound and feed the cable through.
   4) Route service cables from the TelCo NID and service entry. It is recommended running two (2) Category 5e cables between the NID and the network center and one (1) RG6 coax to the service entry.
   5) Mark all cables with application and location.

©Copyright 2008 by On-Q/Legrand All Rights Reserved.

301 Fulling Mill Road, Suite G
Middletown, PA 17057
Phone (800) 321-2343 / Fax (717) 702-2546
www.onqlegrand.com

INSTRUCTION/INSTALLATION SHEET
Network Centers

IS-0141 REV. B

6) Cables at rough-in should be cut at the bottom of the network center.
7) Secure all cables in a manner to protect them during drywall and trim out. Cables must remain accessible to be easily retrieved after drywall.
8) Run a ground wire from the network center location to the house ground.

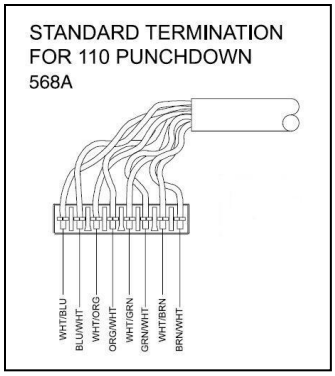

Figure 2

C. Network Center Physical Installation
1) The network center must be mounted securely. For recessed wired installations, locate the stud holding the low voltage bracket or junction box. Install a drywall or wood screw one (1) inch above the top of the opening, leaving the head slightly raised. Using the keyhole on the network center, hang the network center. Level the network center and temporarily install a screw in the lower hole. Mark the locations for the other two (2) holes. Remove the network center and install anchors for the two (2) screws not on the stud. Re-install the network center. Tighten securely.
2) Pull the cables through rectangular opening at the top of the network center. Cable for other applications on the Advanced Network Center can be fed behind and through the large opening below the integral telephone distribution panel.
3) Terminate and connect video cables. Locate video source cable (CATV or antenna), position to attach to the input of the splitter. Cut the cable approximately two (2) inches beyond the splitter, allowing slack for cable management. Use a high quality cable cutter to avoid distortion of the cable and center conductor. If cable marking is cut off, re-mark in an area that will be visible after installation. Strip and prep cable per connector instructions. Use a coax cable stripper to ensure clean cuts without damaging the center conductor. Install high quality "F" style connectors. Use proper insertion and crimp tools. Attach securely to the proper port of the splitter. Repeat for outlet cables.
4) Connect Telephone Service. Identify incoming service cable and route to "Line In" 110 punch-down block. Route cable allowing some slack for cable management and trim cable about two (2) inches beyond the connector. If cable marking is removed, re-mark cable in the area that will be visible after installation. Strip off approximately three (3) inches of the other jacket using On-Q strip tool (P/N 363292-01) or equivalent. Position pairs over color-coded slots on the connector (see ***Figure 2***).

NOTE: Do not untwist pairs

NOTE: White wires may not have color trace stripe. Keep white wire paired with appropriate colored wire.

Without un-twisting cable, position the wires in the individual slots. Punch down and trim wires using On-Q Punch down Tool (P/N 363293-01) or equivalent. Remove excess wire and tug slightly on cable to ensure wire is securely installed in connector. Repeat for outlet cables.
5) After all cables are connected, cables should be grouped and bundled for ease of maintenance.
6) Connect ground wire to ground lug and to ground in outlet. Follow NEC and local codes in installing ground wire.

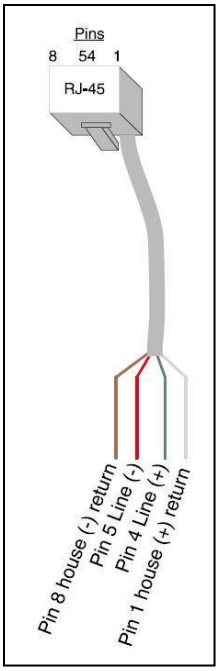

Figure 3

D. Testing and Troubleshooting
1) All cables should be checked to ensure pairs are maintained on category cable and that there are no opens or shorts on any of the circuits. The Coax/UTP tester (P/N 364276-01) makes this test quick and easy.
2) Locating faults can be accomplished using tone generator and probe.
3) After service is activated, be certain network is working at all outlets.

E. Other Advanced Network Center Applications
1) The security interface can be enabled to allow line seizure and dial out capability to most security systems. Connect the RJ31X cable (supplied w/security system) to the RJ45 "security" jack. Turn off "Line 1" on the test switch to activate the security line. Connect the terminals of the RJ31X cable as described in security system instructions (see ***Figure 3***).
2) Surge protection for the telephone may be enhanced using the On-Q Surge Suppressor Unit (P/N 363487-01). See instructions with unit for installation.

F. Cover Installation (optional) see ***Figure 4***
1) Hang cover on the top of the network center using integral hooks. Swing the bottom in place. Use care to ensure cables do not become pinched.
2) Secure and electrically ground the cover to the network center using screws and star washers provided.

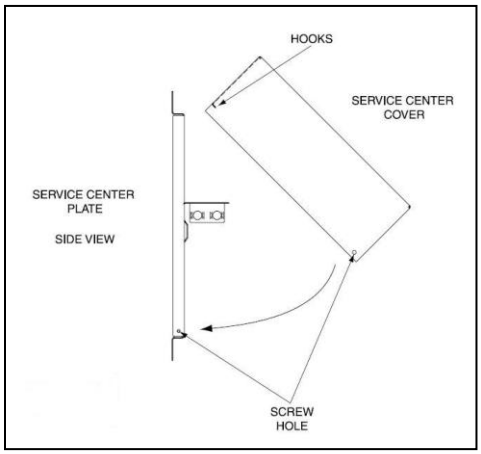

Figure 4

©Copyright 2008 by On-Q/Legrand All Rights Reserved.