FITNESS FACILITY

WIRING SPECIFICATIONS

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SCOPE OF WORK – SUMMARY

The scope of work is to wire the fitness facility for Netpulse connectivity. This will include providing part or all of the following (based on the current infrastructure in place in the facility): Network cabling (Netpulse recommends Cat-5e or Cat-6 cabling), Internet connectivity (via a coaxial cable modem, DSL modem or similar), AC power and coaxial TV.   When completed, there will be network cabling for each unit cabled terminating to the phone closet, coaxial cabling from each unit cabled to terminated to the TV source MPOE (main point of entry in the building), and a power outlet for each screen on the fitness floor.

EQUIPMENT SUPPLIED BY FITNESS FACILITY:

- Unmanaged switch . Cisco or similar switch with the number of ports to accommodate the number of screens, plus at least 3 extra ports
- (Optional, but recommended) Patch panel
- (Optional, but recommended) Patch cables. 3-ft long cables, one per port
- Patch cables for Gateway
- (Optional for organization) Networking Rack to contain switch, patch panel, Gateway. 19" standard
- (Optional depending on location) Raceways for cable management
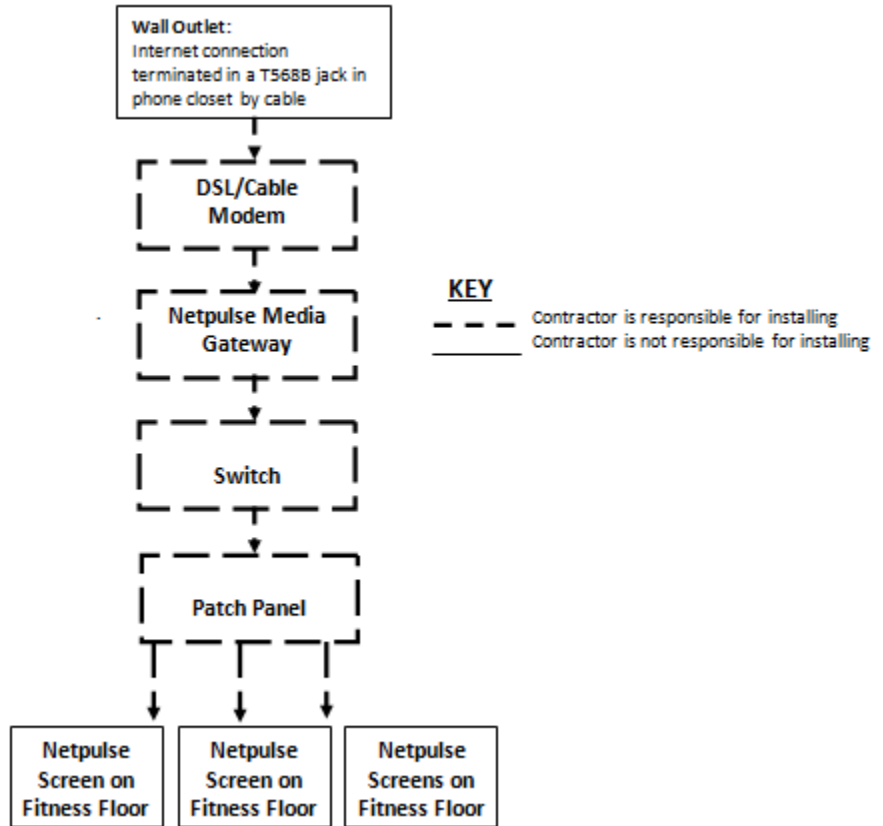- Face plates and connectors for electrical, coaxial, Ethernet outlets

EQUIPMENT SUPPLIED BY NETPULSE:

- Netpulse Media Gateway

TECHNICAL SPECIFICATIONS:

- DATA: Pin Out Information: 1) White/Orange 2) Orange 3) White/Green 4) Blue 5) White/Blue 6) Green 7) White/Brown 8) Brown. (T568B: Straight through data cable). Number all jacks at Netpulse equipment location. Numbering should correspond to patch panel at data equipment location. Note: Data line needs to be terminated into the phone closet (patch panel is recommended).
- TV: 75 Ohm Standard TV Hook-Ups. (RG 6, F Connector) Note: TV lines must be connected to TV source and signal strength must be tested.   If required, TV signal amplifier must be installed.
- ELECTRICAL: 1.0 amp @ 120 VAC per Netpulse screen. Netpulse does not require dedicated circuits. (Netpulse also requires an electrical outlet in the phone closet to support the Internet Data Equipment.)   Data and TV must be run in separate conduit from the electrical.
- NETWORK CABLING: Netpulse recommends Cat-5e or Cat-6 cabling
- There should be no exposed TV or data wiring.
- Netpulse recommends that clubs adhere to the American Disabilities Act (ADA) requirement of 36 inches for the spacing of walkways.

MAP OF DATA EQUIPMENT CONFIGURATION:

Wall Outlet:
Internet connection terminated in a T568B jack in phone closet by cable

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DSL/Cable Modem

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Netpulse Media Gateway

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Switch

↓

Patch Panel

↓ ↓ ↓

| Netpulse Screen on Fitness Floor | Netpulse Screen on Fitness Floor | Netpulse Screens on Fitness Floor |

KEY

– – – Contractor is responsible for installing
——— Contractor is not responsible for installing

SCOPE OF WORK – DETAILED:

1. Install Networking Rack (recommended) or place all equipment in a secure location in phone closet to contain: Netpulse Media Gateway, switch, patch panel and DSL/cable modem.
   A. Connect cabling from each Netpulse unit on the fitness floor to the patch panel (recommended).
   B. Label all the jacks on the wall panel. (Corresponding jacks on the fitness floor to the labeled as well.)
   C. Plug one end of 3-ft gray patch cables into patch panel and other end of switch.
   D. Plug 3-ft patch cable into one of the ports on the switch and plug other end of cable into the Netpulse Media Gateway. Plug in Gateway and switch into power source.

1. Patch panel
2. Patch cables
3. DSL/cable modem
4. Netpulse Media Gateway
5. Switch
6. Power source
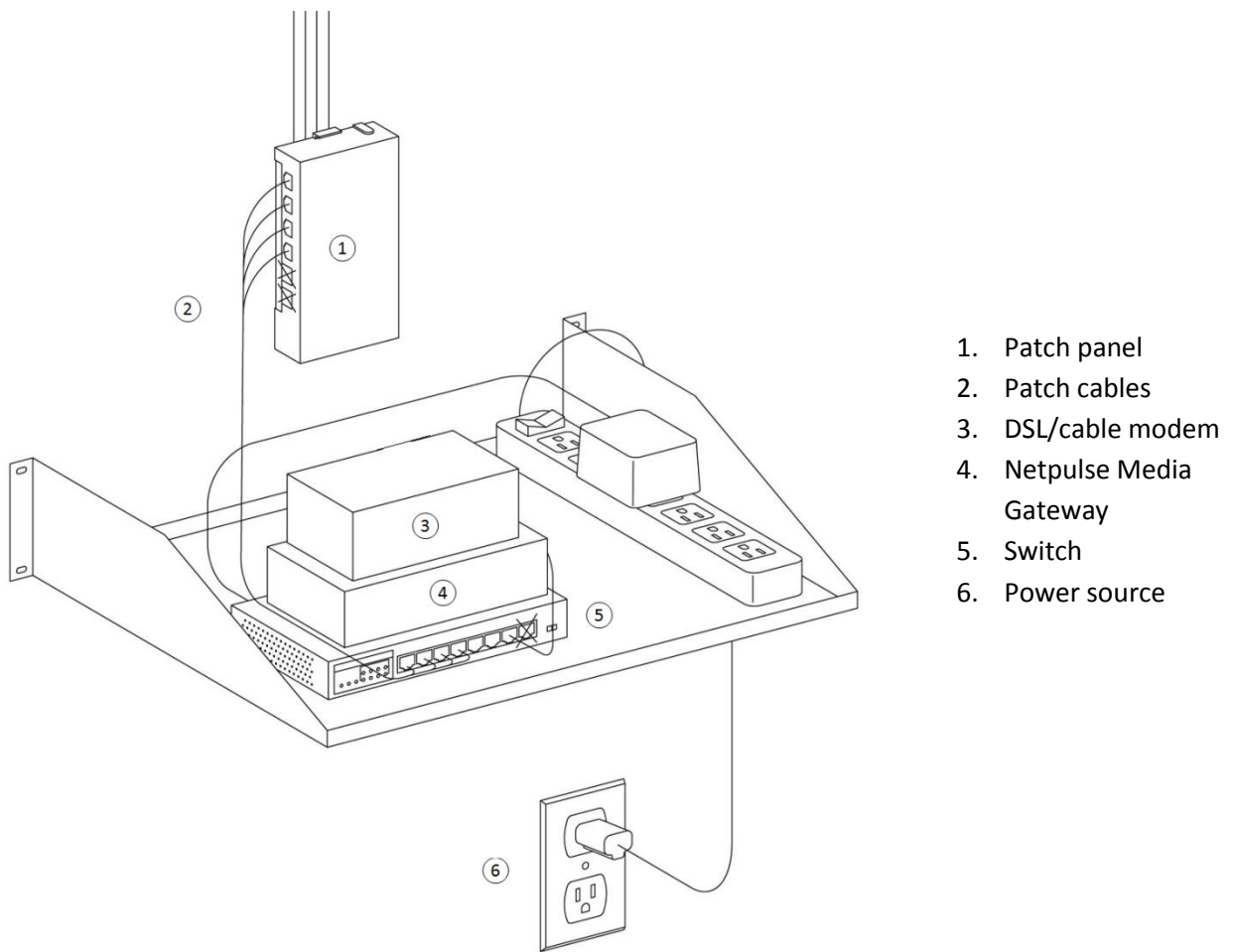
Note: The facility must have a power source within 3 feet of the data equipment location. The data equipment requires 1.0 amps @ 120 volt AC. A dedicated circuit is preferred but not required. The outlet must not be a "switched outlet" that connects to a light switch.

2. Route network cabling from patch panel to fitness room. Method will be determined by the fitness facility. Options:
    a. Routing can be done inside wall and/or ceiling
    b. Routing can be done along floor covered by raceway

3. Provide network cabling from fitness room entry to be terminated at each cardio fitness machine's location. Every screen at every cardio fitness machine must have power.
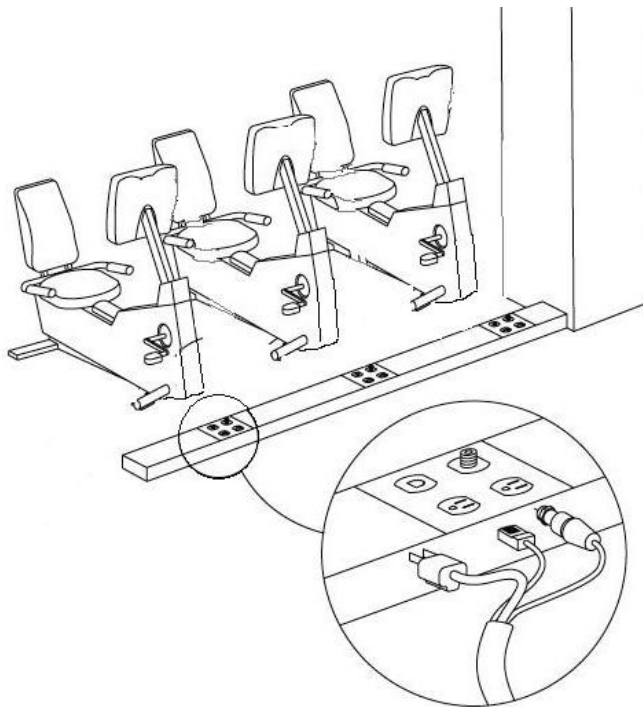
    Four options are shown below.

    Wiring Option #1: LCR with Faceplates.
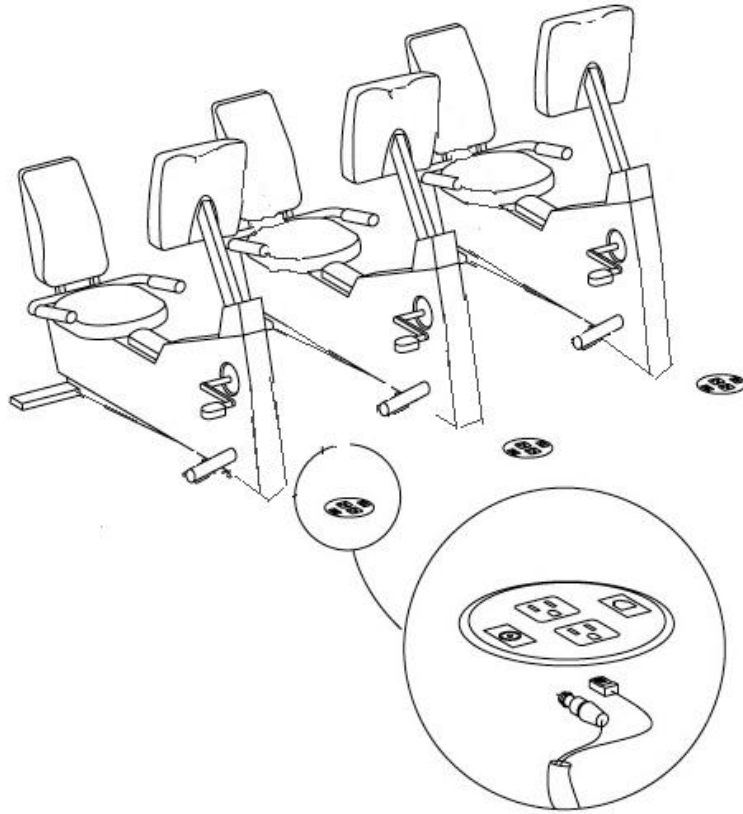   Cables terminate at faceplates.
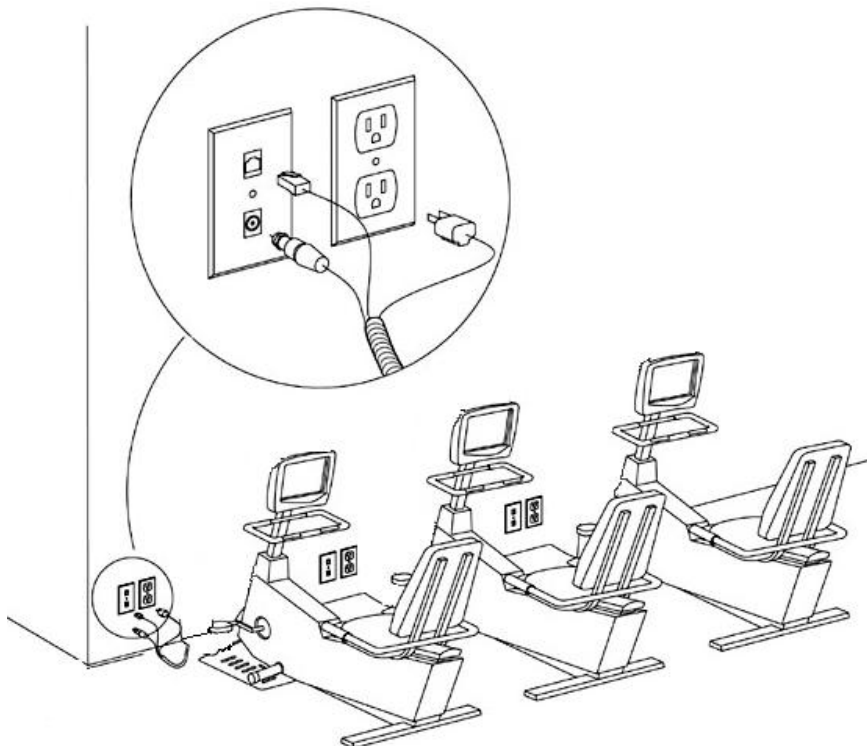
Wiring Option #2: 3 LCR Against a Mirrored Wall
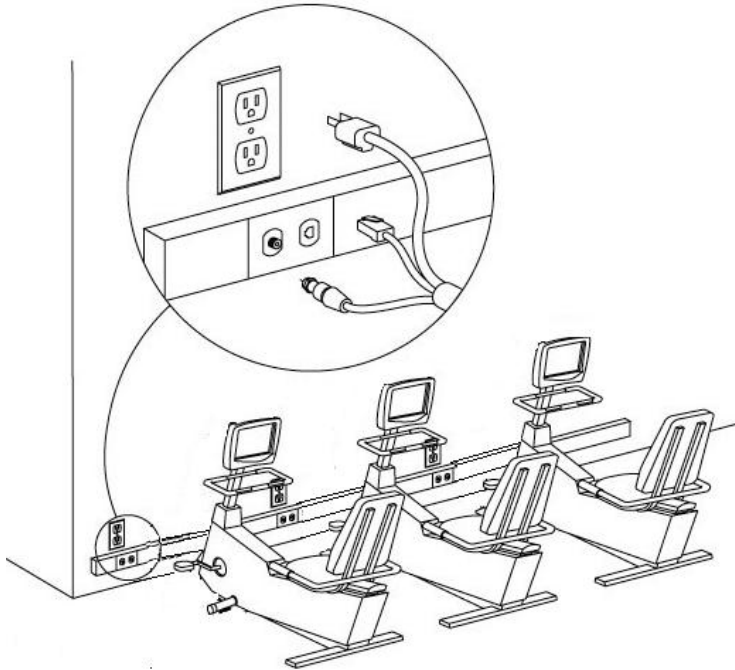
Wiring Option #3: Near Column with Strip of Raceway

**Wiring Option #4: 3 LCR with Floor Mounted Hubbel Jacks**

TV SIGNAL SOURCE SPECIFICATIONS

If your facility has traditional cable TV (analog) you can run the coaxial cable directly to the Netpulse screens and connect to the coaxial connector on the back of the screen.

If your facility has digital cable or satellite TV service (Dish or DirecTV) which requires a box from the cable/satellite provider to view the signal you will need to have a head-end in place to be able to view and change all TV channels from your Netpulse screens (or any personal screen device).   A local Audio Visual contractor will easily be able to create a system.

a. You will need as many cable/satellite boxes as channels you wish to display in the club. If you would like to have 8 channels available then you will need 8 boxes.   The individual channel you choose (e.g. –ESPN) can be changed at any time but you will need to add additional boxes to have additional channels

b. The output of each of these boxes will go into a modulator that will assign a channel number for each box. This is the channel you will choose from the TV or Netpulse screen. So for example, in the below figure you would select channel 7 to view CBS since the box with CBS has been assigned to channel 7

c. The signal from each modulator will then be combined (via a combiner) into a single coaxial cable

d. The coaxial cable will now contain all the channels in your system and can be run to anywhere in the facility and displayed on any TV (including) the Netpulse screens
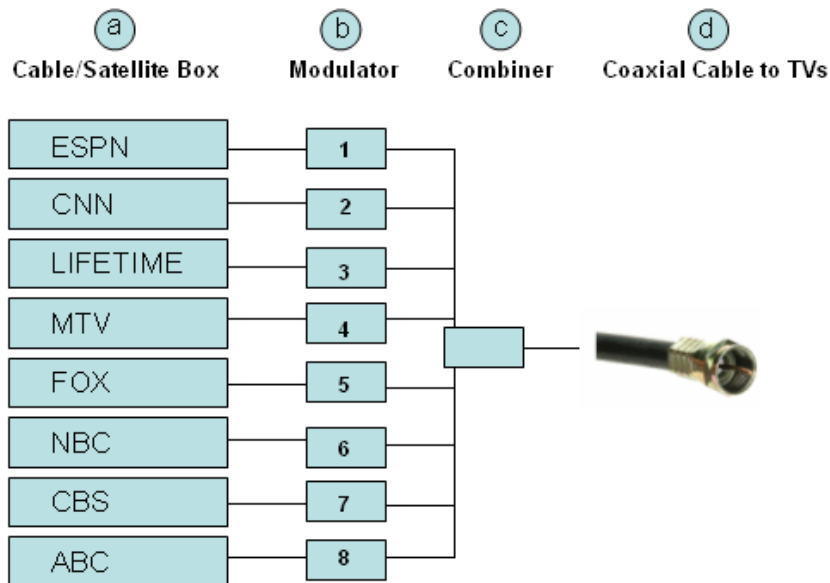
STREAMING REQUIREMENTS

Certain TV content available on Netpulse Network requires to be streamed from the Internet.
To enable streaming, each Netpulse-enabled screen should have a **dedicated 500 Kbps of bandwidth.**

Use the following formula to calculate the amount of bandwidth your facility will need:
- Divide the number of Netpulse-enabled machines by 2 to get the required amount of bandwidth in Mbps. **For example, if your facility has 20 machines, they would need 10 Mbps of bandwidth to enable streaming to all twenty machines.**

APPENDIX PHOTOS: *Network rack mounted in phone closet.*