NYQUIST™

NQ-E7020-G2 Digital Call Switch

Quick Start Guide

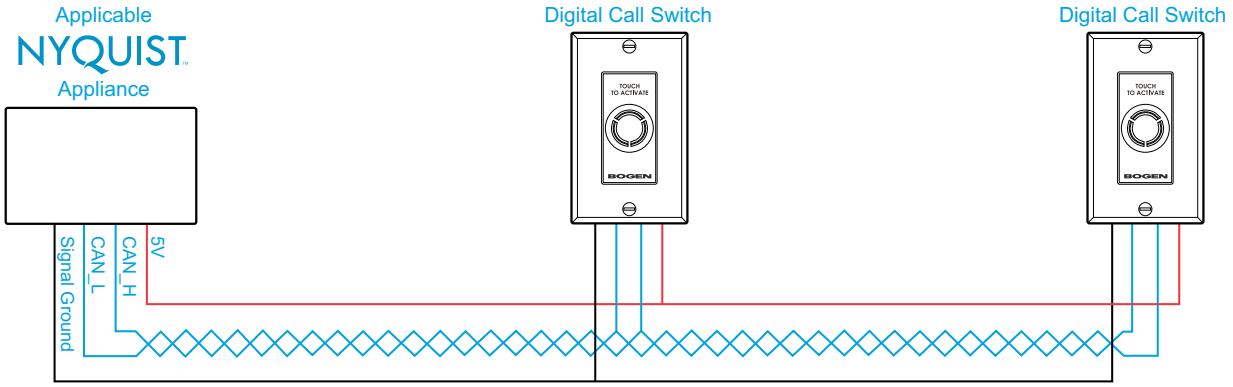


The NQ-E7020-G2 is a single-gang-box-style, wall-mounted, touch-activated switch that allows users to initiate a normal, urgent, or emergency call from classrooms or other staff locations via an associated Nyquist appliance. The switch can also be used to activate Privacy Mode, which disables the talk-back path of the classroom Voice over Internet Protocol (VoIP) speaker.

The switch uses a capacitive touch-button interface with no moving parts to wear out. A full-spectrum color LED ring is used to confirm user actions and to indicate status (for example, changing color and/or state from solid color to blinking), or to acknowledge a button press (e.g., when a user initiates a call or when a call has been terminated). The LED status ring is also used to indicate when the Nyquist system's call queue containing the station's call request is cleared or when the station's call request is individually cleared by the administrative station without responding.

Installation

The NQ-E7020-G2 mounts into a standard single-gang outlet box and is outfitted with a standard decora plate (color based on the switch's specific application and/or customer need). The back has four screw-terminal connections (GND, CL, CH, 5V). These connect to the matching terminals on the CAN Bus source/master device using standard CAT5 cabling. Load resistance needs to be set on the end-of-line DCS (refer to Figure 1).



CAN_H and CAN_L must be a twisted pair like CAT5 cabling.
CAN wiring can be daisy-chained.
All devices are internally terminated and the last switch on the bus must have the termination switch in the "ON" position.
5V and Signal Ground can be either twisted or not.

Figure 1

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Recommended CAT5 Cable Lengths

CAT5 cable lengths and the number of CAT5 wire pairs determine the number of digital call switches that can be daisy-chained (see Figure 2).

Length limits are due to voltage drop across the power conductors. For 2- or 3-pair wire, it is best to tie the solids together and the stripes together at each end of a long run. This will make it easier to keep track of which wires are V+ and V−.

CAUTION

These calculations are based on standard 24-AWG solid copper wire. Calculations will not be accurate for copper-plated aluminum wire or wire gauge less than 24 AWG.

	Number of CAT5 Wires to Carry 5V to Parallel Switches		
	1 Pair	2 Pair (Twisted)	3 Pair (Twisted)
CAT 5 Length (in feet)	**Number of Digital Call Switches That Can Be Deployed**		
600	8	16	24
500	9	18	29
400	12	24	35
300	16	30	48
200	24	48	68

Figure 2

Configuring

NOTE: Refer to the *System Administrator Guide* for detailed instructions on how to configure the digital call switch. Digital call switch configuration is part of setting System Parameters and Class of Service.Compliance

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Limited Warranty, Exlusion of Certain Damages

The NQ-E7020-G2 is warranted to be free from defects in materials and workmanship for five (5) years from the date of sale to the original purchaser. Any part of the product covered by this warranty that, with normal installation and use, becomes defective (as confirmed by Bogen upon inspection) during the warranty period will be repaired or replaced by Bogen, at Bogen's option, with new or refurbished product, provided the product is shipped insured and prepaid to: Bogen Factory Service Department: 4570 Shelby Air Drive, Suite 11, Memphis, TN 38118, USA. Repaired or replacement product(s) will be returned to you freight prepaid. This warranty does not extend to any of our products that have been subjected to abuse, misuse, improper storage, neglect, accident, improper installation or have been modified or repaired or altered in any manner whatsoever, or where the serial number or date code has been removed or defaced.

THE FOREGOING LIMITED WARRANTY IS BOGEN'S SOLE AND EXCLUSIVE WARRANTY AND THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY. BOGEN MAKES NO OTHER WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED AND EXCLUDED TO THE MAXIMUM EXTENT ALLOWABLE BY LAW. Bogen's liability arising out of the manufacture, sale or supplying of products or their use or disposition, whether based upon warranty, contract, tort or otherwise, shall be limited to the price of the product. IN NO EVENT SHALL BOGEN BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, LOSS OF DATA OR LOSS OF USE DAMAGES) ARISING OUT OF THE MANUFACTURE, SALE OR SUPPLYING OF PRODUCTS, EVEN IF BOGEN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSSES. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.

Products that are out of warranty will also be repaired by Bogen Factory Service Department -- same address as above or call 201-934-8500, at owner's expense. Returned products which do not qualify for warranty service, may be repaired or replaced at Bogen's option with a previously repaired or refurbished items. The parts and labor involved in these repairs are warranted for 90 days when repaired by the Bogen Factory Service Department. All parts and labor charges as well as shipping charges will be at the owner's expense.

All returns require a Return Authorization number. For most efficient warranty or repair service, please include a description of the failure.

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