



How to Obtain and Use Pelco Protocols

HELPFUL TIPS FOR PELCO PRODUCTS

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Product Affected: Pelco Protocols

As the manufacturer of the largest base of CCTV camera positioning devices, discreet dome systems, and video/matrix control systems in the industry, Pelco is proud to make our most popular forms of system interface information available to the public. Depending on system needs, there are three relevant protocols for interfacing third-party equipment to Pelco systems:

Controlling multiple cameras via a matrix switcher: ASCII protocol

The Pelco ASCII interface protocol is used to control our most popular matrix switching systems, and the pan/tilt or dome devices that are connected to them. Camera positioning commands sent to the switcher will be translated into the appropriate Coaxitron®, or RS-422 commands as system needs and switcher capabilities dictate (see table below). Using this protocol, a third party system may control pan/tilt/zoom functions; activate presets, patterns, or alarms; activate relays; or call-up cameras to monitors. Depending upon the capabilities of the switcher, this protocol may be used to activate macros and/or control multiplexers and VCRs that are interfaced to the switcher. Common applications for this protocol are for Access Control systems, Phone Line Transmission systems, or PC Control of both cameras and switcher. Interface via the ASCII protocol may require the use of an optional data translator.

Switcher Model Series	Data Translator	PTZ Interface Options	Mux/VCR control via Switch
CM6700	Not Required	Coaxitron, or RS-422	No
CM8500	CM8500DT	Coaxitron, Only	No
CM9500	Not Required	Coaxitron, Only	No
CM9740	CM9760DT or DT4	RS-422 Only	Yes
CM9760	CM9760DT or DT4	RS-422 Only	Yes

Controlling multiple cameras via a Genex® Multiplexer: G protocol

The Pelco “G” protocol is used to control our Genex multiplexers, and the pan/tilt or dome devices that are connected to them. Camera positioning commands sent to the multiplexer will be translated into the appropriate Coaxitron, or RS-422 commands, as system needs dictate. Common applications for this protocol are for Access Control systems, Phone Line Transmission systems, or PC Control of both cameras and multiplexer.

Direct Pan/Tilt/Zoom control of one or more camera locations: RS-422 "D" Protocol

The "D" protocol is used in Pelco's Spectra®, and Esprit™, positioning systems as well as the LRD41Cxx series receiver/drivers. "D" protocol can be used where direct RS-422 control of a dome or receiver/driver is necessary without switcher control. Up to 32 positioning devices may be addressed on a single RS-422 line. Note that **receiver devices may not be addressed by more than one control source**. In other words, you cannot have a Pelco system controlling a dome via Coaxitron, and another device controlling it via RS-422. If the user requirements are to have a Pelco system and the third party device controlling the same camera, then the interface should be with the Pelco system controller (multiplexer or switcher) and it will generate appropriate commands to the camera. This protocol is more difficult to implement than the ASCII protocol detailed above. Most developers will find it much more convenient to use the ASCII protocol.

Certain Pelco products support an RS-422 protocol referred to as "P" protocol. This protocol is not published or supported for third-party use, as it is very difficult to implement without system interaction problems. From a functional standpoint, all third-party RS-422 control issues may be handled by the "D" protocol without compromise to system flexibility or performance. Pelco will eventually discontinue the use of this protocol in new products.

Requests for one or more of these protocol documents should be made via e-mail to techsupport@pelco.com. Requests should include the Company and individual name(s) making the request (with real and e-mail addresses), and a description of the intended application. We do not withhold this interface information from companies making competitive products. Contact information is maintained so that we might notify users if protocol changes are made. Application information is requested to ensure that we recommend the appropriate protocol, and so expectations may be understood and met.

Pelco makes no claims, expressed or implied, regarding the usefulness of these protocols, their implementation, or their correctness. Any use of these protocols is the sole responsibility of the agency or company implementing the protocols. While Pelco will answer limited questions about the protocols, we do not provide programming assistance.

Persons or companies who intend to use the Pelco name or trademarks should first consult the document "Policy regarding use of Pelco Trademarks" which can be found at www.pelco.com.

The contents of these documents and the function of the protocols are subject to change without notice.