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This product specification is based on recognized industry standards for project documentation found within the Construction Specification Institute (CSI) Project Resource Manual – CSI Manual of Practice [5th Edition], MasterFormat™ [2004 Edition], SectionFormat™ [1997 Edition] and PageFormat™ [1999 Edition].

This specification is based on JVC model TM-21A2U and may be used as a manufacturer based proprietary specification or edited to a performance based specification. Optional text is presented in brackets []; delete optional text as required in final project documentation. Specifier Notes are intended to provide information and guidance relative to the specific product or system ensuring proper configuration, performance and operation; delete these notes in final project documentation.

Section 28 23 16

Video Surveillance Monitoring and Supervisory Interfaces

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Commercial security grade twenty one inch flat screen color CRT monitor display for closed circuit television monitoring applications

1.02 RELATED SECTIONS

- A. 01.61.13 Software Licensing Requirements
- B. 01.86.33 Electronic Safety and Security Performance Requirements

Specifier Note: Projects may vary in scope and complexity; as such it is important to identify those sections which may have an impact on system operation or infrastructure integrity. It is important these sections be reviewed and addressed if the project warrants it and/or is the practice of the Specifier. Edit or revise those sections which do not apply to a specific project. Contact a JVC Representative for further assistance.

- C. 28.01.20 Operation and Maintenance of Electronic Surveillance
- D. 28.05.00 Common Work Results for Electronic Safety and Security
- E. 28.06.20 Schedules for Electronics Surveillance
- F. 28.08.00 Commissioning of Electronic Safety and Security Systems

- G. 28.13.33.33 Access Control Interfaces to Video Surveillance
- H. 28.16.33.33 Intrusion Detection Interfaces to Video Surveillance
- I. 28.23.16 Video Surveillance Monitoring and Supervisory Interfaces
- J. 28.23.23 Video Surveillance Infrastructure
- K. 28.23.26 Video Surveillance Remote Positioning Equipment
- L. 28.23.29 Video surveillance Remote Devices and Sensors
- M. 28.31.33.33 Fire Detection and Alarm Interfaces to Video Surveillance

Specifier Note: The convergence of IT Infrastructures and Network Video technology may often require the integration of equipment enclosures and related hardware typically found in data center environments. Edit or revise those sections as required for a specific project or specification practices

- N. 27.11.16 Communication Cabinets, Racks, Frames and Enclosures
- O. 27.21.00 Data Communication Network Equipment
- P. 27.22.00 Data Communication Hardware

Specifier Note: Within large scope projects communication and cabling may often be related to requirements found in the overall building electrical requirements. Edit or revise those sections as required for a specific project or specification practices.

- Q. 26.05.19 Low-Voltage Electrical Power Conductors and Cables
- R. 26.41.23 Lighting Protection, Surge Arrestors and Suppressors
- S. 26.55.53 Security Lighting
- T. 26.56.00 Exterior Lighting

1.03 REFERENCES

- A. UL 60065: Safety Standards for Audio/Video Equipment for Household/Commercial use
- B. FCC Part 15 Radio Frequency Radiators
- C. RoHS

1.04 SUBMITTALS

- A. General: In compliance with Conditions of the Contract and Division 1 Submittal requirements.

1. Product Data: Submit original equipment manufacturers product, installation, operation and maintenance data

Specifier Note: When comparing/choosing digital video security equipment, many products may be derivatives of consumer electronics. The following language ensures the Owner of the proper equipment is being used for the intended purpose.

1.05 QUALITY ASSURANCE

- A. The system shall be manufactured for the intended purpose in a commercial /industrial, 24 hour day, 7 days per week, and 365 days per year operating environment
- B. Manufacturer Qualifications: Obtain [products] [systems] from a manufacturer experienced in the engineering, production and support of networked digital video systems, and, with sufficient production capability to meet the required project schedule
 1. Specified Manufacturer to provide field engineering support services

Specifier Note: Certification or licensing requirements for contractors, installers or integrators of safety and security systems vary from state to state in the continental United States. Verify requirements with the Authority Having Jurisdiction for the specific project. Edit or revise those sections as required for a specific project or specification practices.

- C. Installer Qualifications:
 1. Engage Installer with [license] [certification] [type] as required by the [State of] [City of] with demonstrated successful experience designing, installing, commissioning, training and servicing network based video systems
 2. Installer shall have completed factory training and be certified by the manufacturer as qualified to install, operate and maintain product(s) specified

1.06 WARRANTY

- A. Provide original equipment manufacturers warranty documentation for acceptance by the Owner

Specifier Note: Coordinate paragraph below with manufacturers warranty requirements

1. Warranty Period: [specify term] years commencing with the Date of Substantial Competition

1.07 DELIVERY, STORAGE AND HANDLING

- A. General: Comply with Division 1 Product Requirement Section and the manufacturers recommended procedures for receiving and protection of the equipment.
- B. Storage and Protection: Store materials protected from exposure to extreme or harmful environmental conditions and at temperature and humidity levels recommended by the manufacturer.
 1. Prevent physical damage, soiling or wetting
 2. Provide secure storage prior to and during installation
 3. Provide individual components in the manufacturers original packaging and labeling

1.08 PROJECT/SITE CONDITIONS

- A. Environmental Requirements:
 - 1. Site should be substantially enclosed and secure prior to installation of hardware
 - 2. Environmental systems should be in place and operational
 - 3. Deliver materials onsite at least 24 hours prior to installation to allow materials to reach temperature and humidity equilibrium

PART 2 PRODUCTS

2.01 COLOR CLOSED CIRCUIT TELEVISION MONITOR

Specifier Note: Flat Panel Displays were initially designed for medical, office and home use with a maximum of 8 to 10 hours usage per day. To protect against pre-mature failure, ensure specified FPD's are designed specifically for commercial/industrial use in 24/7 applications.

- A. General
 - 1. Provide commercial security grade twenty one inch flat screen color CRT monitor with two video inputs
 - a. Infrared remote control
 - b. Front Panel Control Lock
 - c. Programmable White Balance:
 - 1. Cool
 - 2. Normal
 - 3. Warm
- B. Audio
 - 1. Provide dual audio inputs
 - 2. Provide one 3 watt speaker output
 - 3. Provide monaural headphone jack output
- C. Electrical
 - 1. Input voltage: AC 120 volts, 50/60 hertz.
 - 2. Power consumption: 1.1 amps
 - 3. Vide Input Signal:
 - a. NTSC: 3.58 and 4.43
 - 1. Horizontal frequency range: 15.75 kHz
 - 2. Vertical frequency range: 59.94 Hz
 - b. PAL
 - 1. Horizontal frequency range: 15.625 kHz
 - 2. Vertical frequency range: 50 Hz
 - c. SECAM
 - 1. Horizontal frequency range: 15.625 kHz
 - 2. Vertical frequency range: 50 Hz
- D. Mechanical
 - 1. Dimensions without stand: 19-7/8 inches (502mm) wide by 19 inches (479.7mm) high by 18-5/8 inches (471.6mm) deep.
 - 2. Picture Tube: 21 inches diagonally
 - 3. Weight: 48.4 pounds (22 kg)
 - 4. Front Panel Controls

- a. Push Buttons x 6
 - 1. Power On/Off
 - 2. Menu On/Off /Okay
 - 3. Input 1 Select / Navigation Arrow Up
 - 4. Input 2 Select / Navigation Arrow Down
 - 5. Volume Down / Navigation Arrow Left
 - 6. Volume Up / Navigation Arrow Right
 - b. RCA x 2:
 - 1. Analog Audio Input 2
 - 2. Composite Video Input 2 – 1.0V (peak to peak) 75 Ohms resistance
 - c. 3.5 mm Mini Jack: Headphones
 - d. Speaker
 - e. LED x 1
 - 1. Power indicator
5. Rear Connections/Controls
- a. RCA x 4
 - 1. Composite Video Input - 1.0V (peak to peak) 75 Ohms resistance
 - 2. Composite Video Output - 1.0V (peak to peak) 75 Ohms resistance
 - 3. Analog Audio Input 1
 - 4. Analog Audio Output
- E. Environmental
- 1. Temperature Range
 - a. Storage: -13 to 122 degrees Fahrenheit (-25 to 50 degrees Celsius)
 - b. Operating: 32 to 104 degrees Fahrenheit (0 to 40 degrees Celsius)
 - 2. Relative Humidity Range
 - a. Storage: 10% to 90%, non-condensing
 - b. Operating: 20% to 80%, non-condensing.
 - 3. The unit is suitable for indoor operation. Provide proper air ventilation and filtration to maintain operating temperature and air quality when mounted in equipment cabinets or other confined areas
- F. Regulatory
- 1. Emission/Immunity:
 - a. FCC Part 15, Subpart B, Class B Device
 - 2. Safety:
 - a. UL 60065
 - 3. Environmental Sustainability:
 - a. RoHS Directive

2.02 MANUFACTURED UNITS

- A. JVC Model Number: TM-21A2U 21” Color Flat Screen CRT Monitor
- B. Included Accessories
 - 1. IR Remote Control with battery

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install the system in accordance with the equipment manufacturers recommended procedures
- B. Install system using generally acceptable industry practices for Closed Circuit Television systems and in compliance with building and electrical codes according to authority having jurisdiction

Specifier Note: The following may be deleted for projects of smaller scope in which full Division 1 project documentation is not provided or required. It is recommended that performance requirements be specified within the project documentation to ensure proper configuration and operation of the system. Contact your JVC Representative for assistance in developing performance specification specific to a particular project.

- C. Ensure system and all related components are configured to support performance requirements outlined in Division 1, 01.86.33 Electronic Safety and Security Performance Requirements

3.02 FIELD QUALITY ASSURANCE

- A. Provide Manufacturer Field Engineering Support for engineering, installation, testing and commissioning assistance as required in Division 1

3.03 COMMISSIONING

Specifier Note: The following may be deleted for projects of smaller scope in which full Division 1 project documentation is not provided or required. It is recommended that performance requirements be specified within the project documentation to ensure proper configuration and operation of the system. Contact your JVC Representative for assistance in developing performance specification specific to a particular project.

- A. Testing: Ensure system operates to manufacturers specifications
- B. Ensure system and all related components are configured to and comply with performance requirements in:
 - 1. Division 1, Section 01.86.33: Electronic Safety and Security Performance Requirements
 - 2. Division 28, section 28.01.20: Operation and Maintenance of Electronic Surveillance
- C. User/Owner Training:
 - 1. Provide original manufacturers [approved] [certified] training for system administrators and operators designated by the Owner
- D. Documentation: Provide [x] set(s) of manufacturers hardware installation and software user guides for each level of authorized users

3.04 INSPECTION/MAINTANENCE

- A. Follow manufacturers recommended practices for preventative maintenance
- B. Comply with Division 28, section 28.01.20 Operation and Maintenance of Electronic Surveillance
- C. Ensure continuous, unrestricted airflow in environment where equipment is installed

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