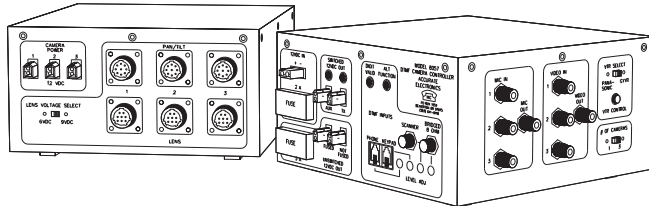


DTMF CAMERA CONTROLLER (DUAL TONE MULTI - FREQUENCY) MODEL 8057



<u>CONTENTS</u>	<u>PAGE</u>
1.) GENERAL	A
2.) OPERATION	A
3.) FEATURES AND BENEFITS	A
4.) SPECIFICATIONS	B
5.) CIRCUIT DESCRIPTION	B
6.) MECHANICAL OUTLINE	B
7.) MAINTENANCE	B
8.) WARRANTY	B

<u>FIGURES</u>	<u>PAGE</u>
Figure 1...CIRCUIT DESCRIPTION	C
Figure 2...MECHANICAL OUTLINE	D
Figure 3...PRIMARY FUNCTION KEYPAD	B
Figure 4...ALTERNATE FUNCTION KEYPAD	B

1. GENERAL

1.01 This practice provides application, specification, circuit and mechanical description, maintenance, installation, and warranty information relating to Accurate Electronics' DTMF Camera Controller Model 8057.

1.02 The controller receives DTMF telephony tones and translates your commands to various visual and audio monitoring equipment. The commands can operate cameras, lenses, pan-n-tilts, tape recorders, video cassette recorders (VCR), camcorders, etc. The command tones can be initiated to the controller on site, remotely from short distances, or a base station. Remote control can occur thru the attached keypad, a telephone keypad, or a telephone buttset.

1.03 The system operator may remotely control the ON and OFF functions of tracking cameras deployed, for purposes of battery conservation, countermeasures defeat, or other specialized operations where selective control of cameras is needed.

2. OPERATION

2.01 The Model 8057 Dual Tone Multi-Frequency (DTMF) Camera Controller enables an operator to control up to three (3) cameras and three (3) microphones from a remote site or locally using common DTMF dialing tones. The DTMF inputs may be supplied from a touch tone phone, keypad or either the low or high impedance audio output of a radio scanner or similar equipment.

2.02 Three separate video (camera) and audio (microphone) inputs are provided. The operator controls which input pair (audio and video inputs 1, 2, or 3) is selected and applied to the VIDEO and MIC outputs. Selecting an input enables the appropriate PAN / TILT, LENS, and CAMERA POWER ports.

2.03 The CAMERA POWER and PAN / TILT ports supply 12VDC while the LENS voltage is switch selectable at 6 volts or 9 volts DC.

2.04 A Video Tape Recorder port is available for DTMF control of either a Panasonic or GYYR brand recorder.

2.05 Two (2) DTMF controlled switched 12 VDC outputs are provided for powering external equipment such as transmitters and recording devices. Input power required for operation of all functions except the switched and unswitched outputs is 12VDC at 2 AMPS maximum.

2.06 When the DTMF Controller is turned ON camera # 1 (center camera) is always first selected and the primary control functions are always active (Figure 3.).

2.07 Using a typical DTMF keypad the camera lens adjustments are accomplished by pressing the appropriate keypad digit; digit 1 (Focus Near), digit 3 (Focus Far), digit 2 (Zoom In), and digit 5 (Zoom Out). The PAN / TILT functions are controlled by digit 7 (Pan Left), digit 9 (Pan Right), digit 8 (Up), digit 0 (Down).

2.08 The other cameras (# 2, # 3) are controlled by first selecting the desired camera; digit 4=camera # 2 (Left Camera), digit 6=camera # 3 (Right Camera) then activating the appropriate function key as with camera # 1 above. The camera select keys (digit 4, digit 6) operate by toggling between the selected camera (# 2 or # 3) and camera # 1. If camera # 2 is active, pressing digit 4 will return control to camera # 1. If camera # 3 is active, pressing digit 6 will return control to camera # 1.

2.09 If only one (1) camera is to be controlled the "# of Cameras" slide switch may be set to the 1 position. Camera # 1 is then the active camera and primary function keypad digits 4 and 6 are disabled. If two (2) or three (3) cameras are used, the "# of Cameras" switch must be in the 2/3 position.

2.10 Additional control functions are available using the alternate function keypad (Figure 4). To access the alternate functions press, in sequence, the * (star) key then the # (octothorpe or "pound") key. The alternate function keypad is now active and the Alt Function LED (yellow) will be ON. The * (star) key will now toggle the TX Power port (12VDC) ON and OFF while the digit 0 key will toggle the AUX Power port (12VDC) ON and OFF. The LEDs (green) associated with the power ports indicate when each port is ON.

2.11 A time lapse video tape recorder (VTR) may be controlled using alternate function digits 1 thru 8. Two (2) brands of recorders are accommodated by the controller, Panasonic and GYYR. A slide switch located on the controller center panel must correspond with the brand of recorder being used. Alternate function digit 8 is used on the GYYR model only and has no effect if the Panasonic brand is selected. Alternate function digit 9 is not used. The # key is used to return to the primary function keypad.

3. FEATURES AND BENEFITS

- Aluminum Heavy Duty Enclosure
- Common Contact Connectors
- Three Channel Capability
- Interconnect Cables
- DC Power Cable
- Supplied With Automobile Cigarette Lighter Adapter Plug
- Video And Audio Output Jacks
- Single Cable Supplies Operating Voltage to Cameras & Video and Audio Signals to Monitors
- Compatible w/ all High Quality Video Cassette Recorders
- High Quality Audio Recording
- Has been Designed for Users with Viewing Advantage for Observation, Video and Audio recording.

4. SPECIFICATIONS

4.01 Electrical

Input Power Connector:
12VDC, 2 position receptacle w/ .093" dia female terminals

Standby Power Consumption: 140 mA

Output Power Connectors:

Unswitched:

(1) fused (3A), 2 position receptacle w/ .062" dia female terminals

(1) not fused (5A MAX), 2 position receptacle w/ .062" dia female terminals

Switched:

(1) AUX (3.5A MAX), 2 position, receptacle w/ .062" dia female terminals

(1) TX (3.5A MAX), 2 position, receptacle w/ .062" dia female terminals

(3) CAMERA POWER (0.25A MAX EA.)
2 position plug w/ .062: dia male terminals

DTMF Input Connectors:

- (1) PHONE: modular jack, 6 pos., 4 contact
- (1) KEYPAD: modular jack, 6 pos., 4 contact
- (1) SCANNER: phono jack
- (1) BRIDGED 8 OHM: phono jack

Audio Connectors:

- (3) MIC IN: phono jack
- (1) MIC OUT: phono jack

Video Connectors:

- (3) VIDEO IN: phono jack
- (1) VIDEO OUT: phono jack

Video Tape Recorder Connector:

- (1) VTR control: phone jack, 2.5mm, 2 conductor

Pan And Tilt Connectors:

- (3) PAN/TILT: circular plastic receptacle, 9 pos., w/ female terminals

Lens Connector:

- (3) LENS: circular plastic receptacle, 8 pos., w/ female terminals

Switches:

- (1) VTR Select: slide, 2 pos., selects Panasonic or GYYR VTR
- (1) LENS VOLTAGE SELECT: slide, 2 pos., selects 6VDC or 9VDC
- (1) # OF CAMERAS: slide, 2 pos., elects single camera control (camera # 1) or all three camera control.

LEDS:

- (1) DIGIT VALID: red, indicates a properly decoded DTMF digit
- (1) ALTERNATE FUNCTION: yellow, indicates alternate DTMF functions are selected.
- (1) SWITCHED AUX POWER (12VDC): green, indicates AUX power is on.
- (1) SWITCHED TX POWER (12VDC): green, indicates TX power is on.

Potentiometers:

- (4) LEVEL ADJ: independent level adjustments for (4) DTMF inputs

Fuse Holders:

- (1) input fuse, 2A
- (1) unswitched 3A

External Power Port Current Ratings:

- 1.) AUX: 3.5A MAX - not fused
- 2.) TX: 3.5A MAX - not fused
- 3.) FUSED: 3A MAX
- 4.) NOT FUSED: 5A MAX

The sum of currents at all external power ports must not exceed 9 amps.

Each camera power output port is rated at 0.25A MAX. These outputs are protected by the 2A input fuse and do not enter into the above calculation.

4.02 Environmental

Operating Temperature: 0 - 65° C
Humidity: up to 95% R.H., no condensation

4.03 Physical

Dimensions: 8.000"W x 4.000"H x 8.000"D
20.320cm W x 10.160cm H x 20.320cm D
Weight: lbs / kg
Finish: black anodized / white lettering

5. CIRCUIT DESCRIPTION

5.01 See FIGURE 1.

6. MECHANICAL OUTLINE

6.01 See FIGURE 2.

7. MAINTENANCE

7.01 No preventive maintenance is required. General care is recommended.

8. WARRANTY

8.01 See WARRANTY in front of catalog.

FIGURE 3. PRIMARY FUNCTION KEYPAD

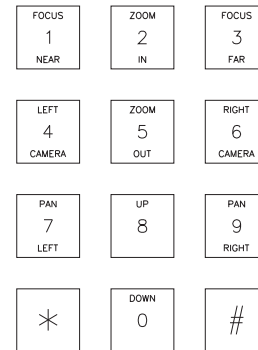
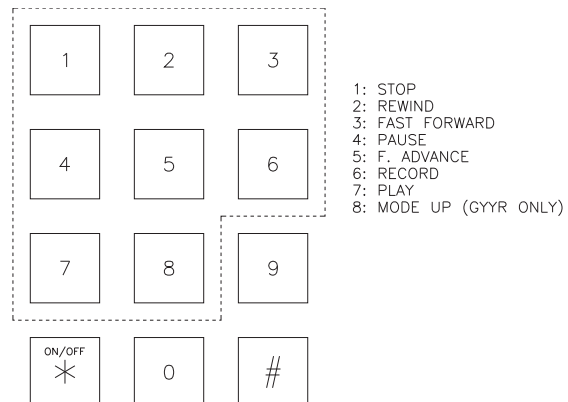
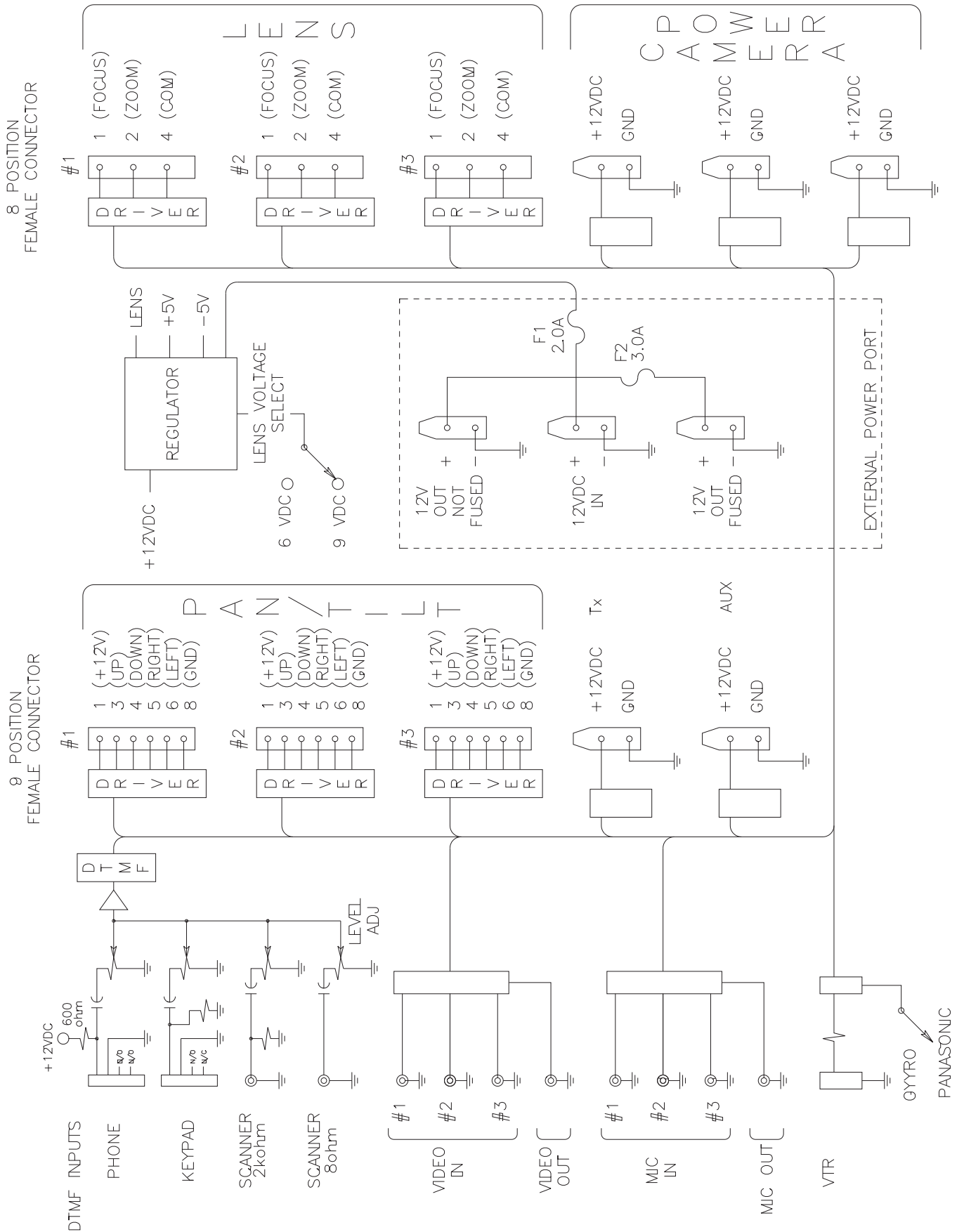


FIGURE 4. ALTERNATE FUNCTION KEYPAD



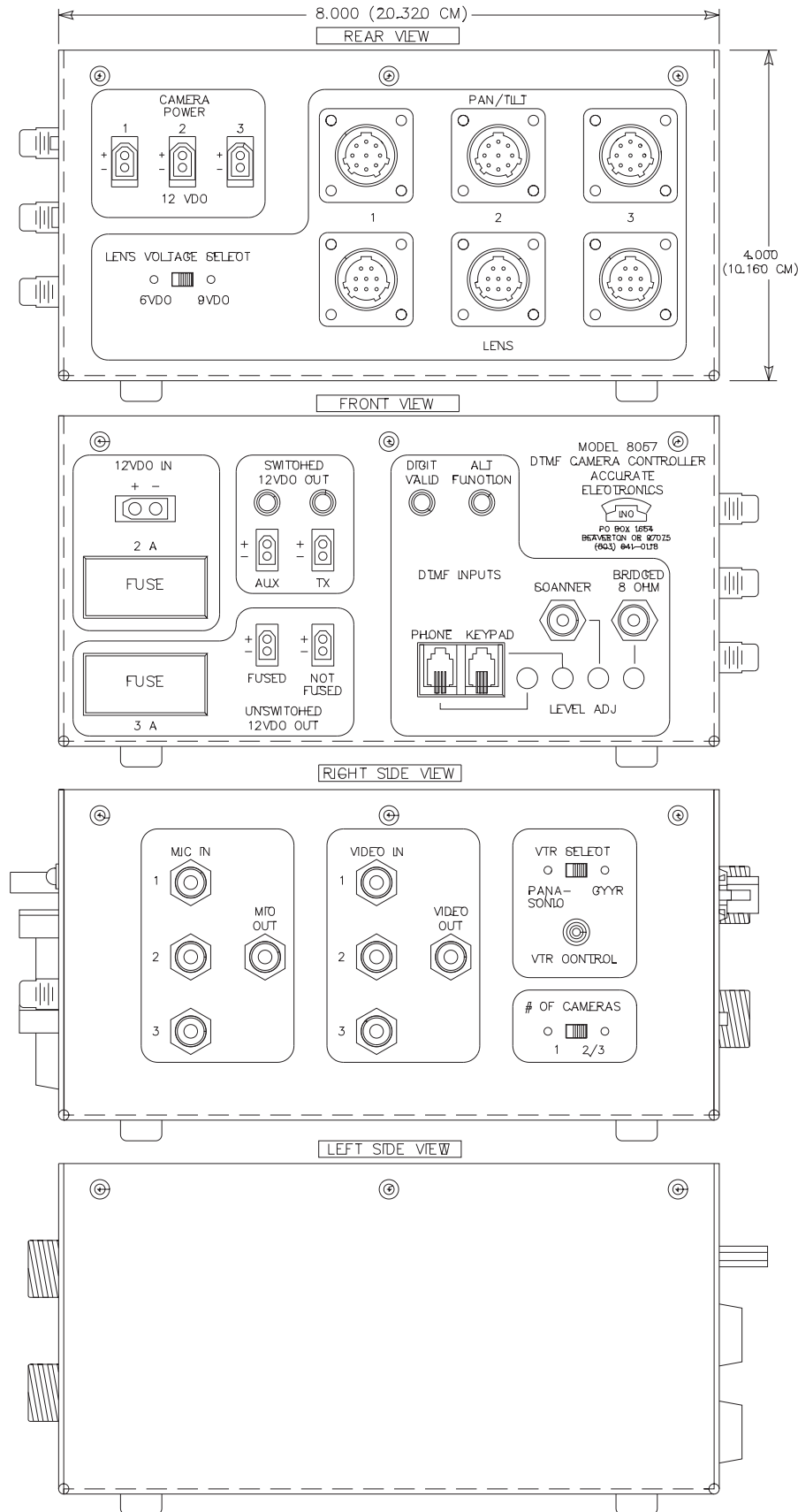
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FIGURE 1. CIRCUIT DESCRIPTION



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FIGURE 2. MECHANICAL OUTLINE



- FIVE (5) **CABLE - EXTERNAL POWER**
 18 AWG 2 conductor 6 ft. w/ Molex plug (pins) and receptacle (sockets)
 (2) Power (3) Camera
- TWO (2) **PIGTAIL - EXTERNAL POWER (AUXILLARY TRANSMIT)**
 18 AWG 2 conductor 2 position 3 ft.
 w/ Molex plug (pins)
 (2) Power
- ONE (1) **EXTERNAL POWER CONNECTOR**
 Power Connector - Receptacle 0.062 dia 2 position free hanging
 Power Connector - Plug 0.062 dia 2 position free hanging
 Terminal - female 0.062 dia 18-24 AWG
 Terminal - male 0.062 dia 18-24 AWG
- THREE (3) **CABLE - CAMERA POWER**
 22 AWG 2 Conductor 3 ft. w/ Molex Receptacle (sockets) and female DC power plug (2.1 mm)
- ONE (1) **CABLE - DC POWER INPUT**
 14 AWG 2 Conductor 6 ft.
 w/ Molex plug (pins) and receptacle (sockets)
- ONE (1) **CABLE - DC POWER INPUT WITH AUTOMOTIVE POWER PLUG**
 16 AWG 2 Conductor 3 ft.
 w/ Molex plug (pins) and automotive power plug (3A fuse)
- ONE (1) **PIGTAIL - DC POWER INPUT**
 14 AWG 2 Conductor 3 ft.
 W/ Molex plug (pins)
- ONE (1) **INPUT POWER CONNECTOR**
 Ring Terminal #10 stud, 14-16AWG, uninsulated
 Power Connector - plug 0.093 dia 2 position free hanging
 Terminal Male 0.093 dia 14-20 AWG
- THREE (3) **CABLE- PAN / TILT**
 22 AWG 9 conductor 6 ft.
 W/ 9 pin CPC, plug (sockets) and receptacle (pins)
- ONE (1) **PAN / TILT**
 Plug, CPC 9 position free hanging
 Cable clamp, cpc
 Terminal female (socket)
- THREE (3) **CABLE - LENS**
 22 AWG 8 conductor 6 ft.
 W/ 8 pin CPC, plug (sockets) and receptacle (pins)
- ONE (1) **LENS**
 Plug, CPC 8 position free hanging
 Cable clamp, CPC
 Terminal, Female (socket)
- ONE (1) **PIGTAIL - VTR (VIDEO TAPE RECORDER) CONTROL**
 22 AWG 2 conductor 6 ft.
 w/ phone plug (2.5 mm)
- EIGHT (8) **SHIELDED CABLE**
 6 ft. W/ phone plug each end, grey
- ONE (1) **DTMF INPUT**
 Phone plug 2 conductor solder terminal black