



The CBR-16CS, a 16-camera, color, simplex video multiplexer

The CBR-16CS is ideal for applications where recording performance, automation and system control are desired, yet economy and ease of use are required. Live cameras are displayed in full or sequencing full-screen while full resolution pictures from all cameras are recorded to a VCR. Patented Parallel Video Processing (PVP™) outputs up to 60/50 (NTSC/PAL) unique pictures to your VCR, delivering more recorded documentation than conventional multiplexers. VEXT automatically optimizes multiplexer/VCR synchronization and prevents loss of critical pictures regardless of VCR record speed or how often record speeds change.

Easy to install and integrate, the intelligent CBR-16CS is set up through QuickInstall on-screen menus. Macros trigger a prerecorded key sequence, offering one-button response to alarms, guard shift change or day/night setups. Tapes recorded using other manufacturers' multiplex-

## Features

- PVP™ ultrafast VCR and monitor update speed
- VEXT automatic VCR record speed synchronization
- Video motion detection (intrusion) and activity detection with active feedback setup scope
- S-VHS VCR input and output
- Live in full-screen, sequencing, PIP, quad, 7, 9, 10, 13 or 16-up display
- Playback in full-screen, sequencing, PIP, quad, 9, 10 or 16-up display
- Covert camera feature removes selected camera(s) from display without altering recording
- Independent monitor A/B sequence and dwell times
- One-touch "freeze"
- Electronic PTZ
- 16 alarm inputs, 2 relay outputs
- Alarm history display (100 events)
- Manually activated alarm

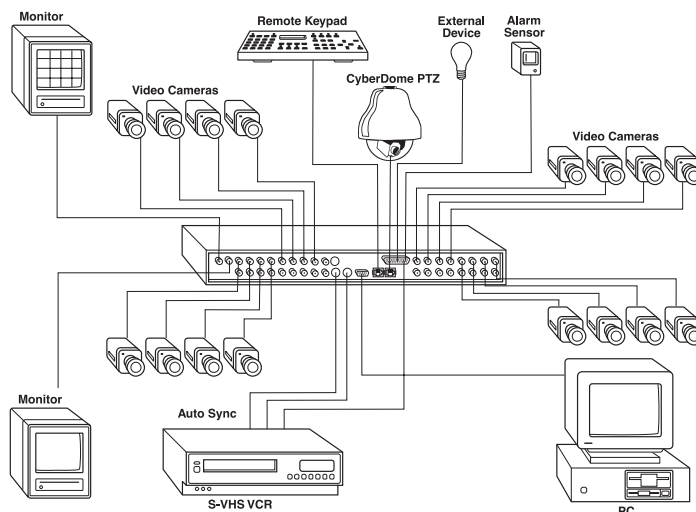
ers can be played back, allowing retrofit without loss of investment or access to tape archives.

- 16 macros
- Motorized PTZ control with CBR-KB3/J keyboard\*
- Supports up to 31 keyboards via RS-485
- Cascade up to 31 multiplexers via RS-485
- RS-232 and/or RS-485 remote control, setup upload/download, and diagnostics
- Plays back tapes made by other manufacturers' multiplexers\*\*
- Setup view screens show entire system setup
- Camera histogram diagnoses correct camera setup
- Two passwords for supervisor or standard user
- AutoInstall™ with AutoList™, automatic camera detection, automatic gain control
- Time, date and titling display
- Battery backup

The CBR-16CS. High value record performance, automation and control, easy setup.

\* Call Kalatel for a list of supported third-party PTZ hardware. Additional Calibur hardware may be required in some systems.

\*\* Call Kalatel for a list of other multiplexer manufacturers whose tapes our units will play back.



## System Diagram

The CBR-16CS connects to up to 16 cameras. Two monitors can be used, one to view multiscreen display and one to view sequencing full-screen display. VEXT connection ensures automatic and precise multiplexer/VCR synchronization. One external alarm sensor can be connected per camera. Remotely controlled by a PC via RS-232 or RS-485. A total of 32 multiplexers and keyboards can be connected to the same system.

## Technical Specifications

### Video

**Display memory:** 2048 x 2048 memory array, 32 MB total display memory  
**Colors:** YUV 4:2:2, 16.8 million colors  
**Grayscale:** 256 levels  
**Horizontal resolution:** 720 pixels  
**Vertical resolution:** 484 active lines NTSC/EIA, 576 active lines PAL/CCIR  
**Sampling rate:** 17.7 MHz (PAL/CCIR), 14.2 MHz (NTSC/EIA)

### Alarm Handling

**Alarm inputs:** 16 programmable NO or NC in menus.  
**Alarm outputs:** 2 form C relays, each NO and NC. Rated 0.5 A continuous, 1.0 A momentary.  
**Alarm latching:** 3 settings: latched; transparent; timed-out. Programmable 1-100 seconds.  
**Alarm recording:** Automatic priority control, interleaved or exclusive, or none. Programmable.  
**Alarm displays:** Automatically switch to alarmed camera

### Video Motion and Activity Detection

**Zones per camera:** 256, 16 x 16 grid  
**Sensitivity settings:** 10 levels with active feedback setup scope  
**Gray levels per zone:** 256 levels  
**False alarm rejection processing:** 3 levels  
**Size discrimination:** 256 levels  
**Recording priority:** 2x, 4x, interleaved, or none  
**Status output:** Link to relays

### DB-25 Pinouts

| Pin #   | Designation                          |
|---------|--------------------------------------|
| 1-16:   | Alarm inputs, NO or NC, programmable |
| 17, 21: | Alarm out #1, NO or NC, isolated     |
| 18-20:  | Ground                               |
| 22, 25: | Alarm out #2, NO or NC, isolated     |
| 23:     | Alarm acknowledgment. Input, NO      |
| 24:     | VCR camera SWITCH INPUT (VEXT)       |

### DB-9 Pinouts

| Pin # | Designation |
|-------|-------------|
| 2:    | Tx          |
| 3:    | Rx          |
| 5:    | Ground      |

### Remote Control and Programming

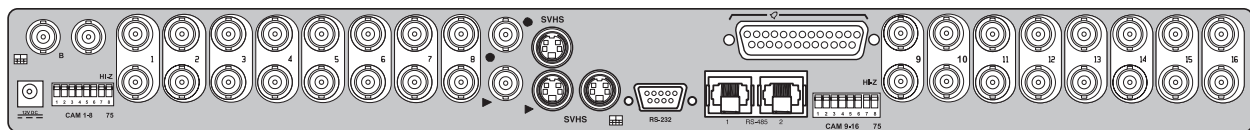
**RS-232:** DB-9, female. 3-wire, N-8-1, baud rate selectable in menus. Allows remote programming of menus, upload of status data, remote control of front panel buttons.  
**RS-485:** RJ-45, remote keyboard input, looping, up to 3000' without adapters. Time I/O system. Allows remote programming of menus, upload of status data, remote control of front panel buttons.

### Miscellaneous

**Input voltage:** 12 VDC, 90 V - 264 V AC/DC adapter included  
**Power:** 25 W nominal  
**Temperature:** 0 to 40° C (32 to 104° F), operating  
**Relative humidity:** 90%, noncondensing  
**Dimensions:** 17.5 x 14 x 1.7 in. (444 x 360 x 43 mm)  
**Weight:** 9 lbs. (4 kg)

### Ordering Information

**CBR-16CS:** 16-camera, simplex, color, NTSC/EIA  
**CBR-16CSX:** 16-camera, simplex, color, PAL/CCIR  
**CBR-KB3(X):** Optional remote keyboard, includes motorized PTZ control capabilities  
**CBR-KB3/J(X):** Same as CBR-KB3 but with proportional joystick control  
**CBR-RK2:** Optional 1U rackmount kit  
**CBR-ALM:** Optional alarm input module  
**CBR-PB2:** Optional probridge for PTZ applications (contact Kalatel for available models)



Rear Panel Inputs and Outputs

### Inputs

**Camera:** 16 looping, BNC connectors, NTSC/EIA or PAL/CCIR compatible  
**VCR:** 2 NTSC/EIA or PAL/CCIR compatible; 1 BNC connector; 1 4-pin, mini-DIN, S-VHS YC input.  
**Conditioning:** AGC, 0.7 to 2.0 Vp-p video accepted  
**Termination:** Manual ON/OFF 75 ohm on rear panel, per camera.

### Outputs

**Monitor:** 2: 1 MON-A multiscreen output, BNC connector NTSC/EIA or PAL/CCIR compatible; 1 MON-B full-screen switched, BNC connector; NTSC/EIA or PAL/CCIR compatible. (S-VHS not used)  
**VCR:** 2 NTSC/EIA or PAL/CCIR compatible; 1 BNC connector; 1 4-pin mini-DIN, S-VHS YC output.

### Kalatel

PMB 225, PO Box 3004  
 Corvallis, OR, USA 97339  
 www.kalatel.com

### Americas

toll free 800-469-1676  
 tel 541-754-9133  
 fax 541-754-7162

### Asia

tel 852-2907-8108  
 fax 852-2142-5063

### Australia

tel 61-3-9259-4700  
 fax 61-3-9259-4799

### Europe

tel 32-50-51-32-34  
 fax 32-50-51-66-28