ZMX Plus
MULTIPLEXER RANGE

ZMX+/CT/16M4
ZMX+/CT/32M4

ZMX+/CT/16M4   16 Way Colour Triplex with Matrix   **ZMX+/CT/32M4**   32 Way Colour Triplex with Matrix

FEATURES

- Triplex™ operation (simultaneous Play, Live and Record)
- Direct VCR control from the multiplexer keyboard via RS232
- Variable speed telemetry control for interface to AC, DC and DAX dome converters
- PVP (Parallel Video Processing) for up to 50 fps update rate in Live and Record modes
- Integration to other systems using Macro RS232 commands
- Covert camera setting to prevent operators viewing the images in Live or Replay modes
- AutoList™ enables automatic sequence list set up with variable dwell time for up to 5 monitors
- Bax-net compatible for system integration to multiplexers, matrices, and remote keyboards
- Simplified menu structure with password protected User and Installer menus
- View screens option for instant parameter set-up validation
- Decodes tapes from other major manufacturers (eg. DM and Robot)

Specifications

Inputs and Outputs	16 loop-through camera inputs (ZMX+/CT/16M4) with automatic termination (32 with ZMX+/CT/32M4) Composite and S-VHS VCR input and output VCR (Vext input) automatically synchronises the recording speed Five way monitor matrix with on-screen captions
Function Keys	16 user-defined, macro style functions 16 user-defined submacro style functions Up to 20 event (Macro) Scheduler Macro Function commands, daily, or once a week at a specified time.
Display Options	*Monitor A* Digital, full-screen, sequence (adjustable dwell and camera list), selectable multi-screen formats for LIVE and PLAY mode, TRIPLEX selectable multi-screen formats showing concurrent LIVE and PLAY images (ZMX+/BT/16 and ZMX+/CT/10 models), x2 electronic zoom, freeze frame, digital pan and tilt. *Monitor B* Analogue, full-screen, sequence (adjustable dwell and camera list) *In RECORD mode* Record and Playback. In 3-hour, multiplexed, record-mode the multiplexer typically records up to 50 unique fields of video per second, with no requirement for synchronising cameras. Compatible with all common time-lapse VCRs Programmable time-lapse modes (Normal and Alarm) Data restored at playback; time/date, alarms and camera titles
Alarm Events	16 alarm-inputs each N/O or N/C on a 25-way D-type connector (max. 100Ω contact resistance) 32 alarm inputs with optional 32 way expander. Videoloss Detection and Motion Detection (activity and intrusion) *Alarm Responses* Interleaving or exclusive recording of alarmed cameras Normal and Alarmed recording speeds Alarms : buzzer, flashing LED and on-screen A/ALM text Videoloss : buzzer, flashing LED and on-screen V/VDL text Recorded alarms are also indicated during playback 2 Alarm-output relays max 30V AC/DC, contact max 500 mA - N/O or N/C programmable

BAXALL LIMITED

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Specifications

Alarm Events (contd.)	Manual-Reset, Auto-Reset, or Contact-Closure. Keyboard and External Alarm Clear. External Alarm Actuation (from front panel)
Telemetry	Built-in Baxall telemetry
All Video Inputs and Outputs	75 Ohm BNC connectors Video: 1V pk-pk composite (PAL compatible). Composite or S-VHS VCR connections High display resolution 512 x 576, Recorded resolution 512 x 288
Camera Switch Input (Vext)	Accepts a TTL, field-synchronised, negative going pulse, duration 2-5 ms. Edge triggered with the edge selectable in the menus. HIGH level, +4.5V to +5.5V LOW level, 0V
Power **Power Consumption**	Auto-ranging : 110/230V AC (10%, 50Hz, to 12V DC external power supply provided. Max : 38W
Physical Specifications	Operational temperature limits 0° C to +40° C at 10% to 80% relative humidity (non-condensing) Storage temperature limits -20° C to +60° C at 10% to 95% relative humidity (non-condensing)
Dimensions	443 (W) x 90 (H) x 358 (D)
Weight	6.5 kg (unit) 8kg (shipping)
Colour	Grey

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The Triplex™ multiplexer with integral matrix control functions shall be a Baxall ZMX+/CT/16M4 (ZMX+/CT/32M4) or better.

The digital multiplexer shall provide full resolution, time division multiplexing of up to 32 [monochrome] [colour] video inputs, with independent output to up to 5 (five) monitors (1 digital, 4 analogue).

The unit shall have record and playback connections to VHS and SVHS video recorders. The unit shall be rack-mountable and shall feature a high degree of built-in intelligence to simplify the setting-up and operating processes.

The unit shall have two digital video processors and include PVP™ (Parallel Video Processing). The PVP™ feature provides image update rates in Live and Record modes of up to 50 unique fields per second. Increased video update rates in Live multi-screen will be achieved using conditional update.

Continuous recording will occur with simultaneous user selection of Live or Playback modes or both using the Triplex™ function on the same digital multi-screen. The unit shall also incorporates all the features of typical Duplex multiplexers.

The unit shall have an integral 32 x 5 video matrix switcher . Matrix switching functions of group switching, alarm priority switching, alarm zone switching shall be included.

User defined sequence tables, alarm response functions and recording lists shall be standard. Up to 4 (four) monitors shall have analogue full screen or sequenced video displays. The Main monitor will have user defined digital full screen, sequenced, or selectable multi-screen display in Live, Record and Playback modes. The unit shall include AutoList™ capability to automatically record a sequence of keystrokes to set up camera sequences on any monitor.

The Triplex™ multiplexer shall have direct RS232 control, via its front panel, of the standard VCR key functions; Play, Record, Rewind, Fast Forward, Pause, Stop, Frame Advance and Frame Reverse. In addition, a functional link between the Play and Record keys will operate both the VCR and the multiplexer simultaneously. Additional RS232 commands may be sent and received by the multiplexer through sub-macros for integrating the multiplexer into other digital command and control systems.

In Record mode, multiplexed digital recording of video fields from cameras shall be programmable by the user but shall be automatically modified in the event of alarms, activity detection or intrusion detection.

Recording speeds for normal, alarm, activity and intrusion detection shall be separately programmable. A connection for a VCR clock pulse (VEXT) shall be provided to ensure any change in VCR speed shall be automatically matched by the multiplexer with no manual changes necessary. The unit shall have the ability to match recording speeds of a wide range of VCR's with field delay capability of 1 to 333 in steps of 2 which correspond with speeds of 3 to 996 hours settings.

In Live mode, the unit shall display images at a rate of up to 50 fields per second. The operator will have the choice of viewing options on

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the Main digital multi-screen monitor including; full screen, full screen sequence, picture in picture (PIP, movable and sizeable), 4, 7, 9, 10, 13, 16, or 25 way views and cameo sequence in any multi-screen. All sequence dwell times and multi-screen configurations shall be user programmable.

The operator shall have a selection of manual picture controls on the Main monitor including; full screen image freeze, 2X digital zoom and digital pan tilt of frozen or Live image. These manual controls shall be available in Live and Playback modes.

Covert camera mode shall be available during Live mode if selected whereby some camera views will not be displayed on the monitors but will continue to be recorded.

Digital time base correction shall be used to eliminate the need to synchronise camera inputs and to avoid duplication of adjacent recorded fields when switching between cameras.

Multiplexed recordings to tape shall include time, date and any on screen camera ID, titling and status information. In Playback, the operator shall have a choice of displays and manual picture controls similar to those in Live mode. In Playback mode, the unit shall display images at a rate of up to 50 fields per second.

The unit shall have the ability to play back videotapes multiplex recorded on systems as follows; Baxall ZMX-IT and Storm, DM format, ROBOT format and Norbain Gen3 series.

The unit shall be menu programmable using the front panel keys or from a remote keyboard. The menu system shall be password protected with two levels of passwords; one for installers and one for operators. Menu text may be translated and displayed in local languages as required and available. The menu system shall utilise "Windows style" pull-down options for simple programming and usage. A System View menu will be available whereby all multiplexer programmed parameters are available to view by the user.

Simplified set-up functions will be included. The unit shall have automatic camera termination, automatic and manual camera AGC control, automatic camera detection and automatic colour or monochrome setting.

The Triplex™ multiplexer shall include user programmable macros. Macros will enable the user to pre-program up to sixteen commonly used sequences of key-strokes and recall them manually by just two presses or automatically if linked to a timed event or an alarm input. Changes of system set-up and response activity shall be accomplished through a macro rather than through a menu item change.

32 alarm inputs and two alarm outputs shall be provided. In the event of an alarm several user programmable responses may be activated automatically. The alarmed camera view shall be displayed on the pre-programmed monitor or up to 5 (five) monitors.

The alarmed camera view and up to an additional 3 (three) camera views of associated cameras will be displayed on the Main multi-screen monitor. The alarmed camera image may be frozen at the time of alarm and displayed on the multi-screen monitor with its associated camera views.

Multiple alarms will sequence on multiple monitors as programmed and be displayed in multi-screen views as programmed. An LED will flash on the front panel, an internal alarm buzzer will sound according to its program, and video recording and multiplexing times will be adjusted according to the program. Alarms may also be activated manually through pseudo alarm activation on the front keyboard. A one hundred (100) event alarm history shall be maintained and shall be viewable by authorised users.

Video loss from any camera shall be detected and signalled on the monitor together with the last frame of video received before video was lost.

Camera inputs may be enabled or disabled during system set-up through the menu system. The alarm outputs shall be capable of activation by active alarms, macro functions, activity detection or intrusion detection.

The unit shall include activity and intrusion detection facilities. Each camera input may be programmed for either type of detection capability with different parameter settings for each.

Activity detection shall have record rate adjustment settings and alarm output functions. Intrusion detection shall have target size settings, false alarm rejection and alarm activation capability. The user may select detection to be active in any combination of 256 zones (in a 16 x 16 grid) within the camera view. There shall be at least 10 sensitivity levels for each camera to compensate for contrast and lighting conditions.

A sensitivity scope shall be included in the set-up programming to assist in properly setting sensitivity. Target size adjustment shall have 256 levels. To compensate for movements and lighting changes that would normally create false alarms, 3 levels of alarm rejection are to be available; Low, Medium and High.

The unit shall incorporate a telemetry transmitter compatible with Baxall ZR series telemetry receivers and Baxall DAX variable speed dome controller, which support Baxall proprietary "down-the-coax" telemetry.

All the functions of the receivers shall be controlled by push buttons on the multiplexer's integral or remote keyboard. Any receiver presets shall be recalled either by an alarm input or manually from the keyboard. Any monitor may display and control telemetry cameras.

It shall be possible to configure up to 32 multiplexer's or keyboards in any combination on an RS485 bus. The unit shall be Baxall Baxnet compatible.