

Allegiant[®] Microprocessor-Based Video Switcher/Control Systems

Instructions for Use

**LTC 8500 Series
LTC 8600 Series
LTC 8800 Series**



This Instruction Book refers to “TC- prefix” model designations. Use this cross-reference to find the new corresponding “LTC-prefix” model numbers. A revised instruction book will be printed at a later date.

LTC 8900	TC	Allegiant® Microprocessor-Based Video Switcher/Control Systems
LTC 8901/00	----	Equipment Rack, for LTC 8901 Bay
LTC 8905/90	----	Power Supply, 120/220VAC, 50/60Hz
LTC 8910/00	----	CPU Module for LTC 8901 Bay
LTC 8917/00	----	Relay ("Hot Switch") Module, For LTC 8901 Bay
LTC 8901/60	----	CPU Equipment Bay, 120V, 60Hz. Includes: 1 LTC 8901/00, 2 LTC 8905/90, 2 LTC 8910/00, & 1 LTC 8917/00
LTC 8901/50	----	CPU Equipment Bay, 220V, 50Hz. Includes: 1 LTC 8901/00, 2 LTC 8905/90, 2 LTC 8910/00, & 1 LTC 8917/00
LTC 8902/00	----	Equipment Rack, for LTC 8902 Bay
LTC 8916/00	----	Data Receiver Module, for LTC 8902 Bay
LTC 8902/60	----	Monitor Output Equipment Bay, 120V, 60Hz. Includes: 1 LTC 8902/00, 1 LTC 8805/60 & 1 LTC 8916/00
LTC 8902/50	----	Monitor Output Equipment Bay, 220V, 50Hz. Includes: 1 LTC 8902/00, 1 LTC 8805/50 & 1 LTC 8916/00
LTC 8903/00	----	Equipment Rack, for LTC 8903 Bay
LTC 8918/00	----	Data Receiver Module, for LTC 8903 Bay
LTC 8903/60	----	Camera Input Equipment Bay, 120V, 60Hz. Includes: 1 LTC 8903/00, 1 LTC 8805/60 & 1 LTC 8918/00
LTC 8903/50	----	Camera Input Equipment Bay, 220V, 50Hz. Includes: 1 LTC 8903/00, 1 LTC 8805/50 & 1 LTC 8918/00
LTC 8921/00	----	Video Input Module, for LTC 8900 System
LTC 8934/00	----	Video Output Module, for LTC 8900 System
LTC 8941/90	----	PC Package. Includes 1 LTC 8943/90, 2 LTC 8945/90, 1 Monitor, Misc. Cables, 120/220V, 50/60Hz
LTC 8943/90	----	PC, Pentium, 120MHz, 40M RAM, 1.6G Drive, Windows NT, 120/220V, 50/60Hz
LTC 8944/60	----	PC, Pentium, 120MHz, 40M RAM, 1.6G Drive, Windows NT, 120/220V, 50/60Hz
LTC 8945/90	----	LAN Hub, 12-Port, SNMP, 120/220V, 50/60Hz
LTC 8946/90	----	Expansion LAN Hub, 12-Port, 120/220V, 50/60Hz

LTC 8800	TC8800	Allegiant® Microprocessor-Based Video Switcher/Control Systems
LTC 8800/00	TC8802R	Equipment Rack, for LTC 8801 Bay
LTC 8801/60	TC8801A	Main Switching Bay, 120V, 60Hz
LTC 8801/00	TC8801R	Equipment Rack, for LTC 8801 Bay
LTC 8801/50	TC8801AX	Main Switching Bay, 220V, 50Hz
LTC 8802/60	TC8802A	Monitor Expansion Bay, 120V, 60Hz
LTC 8802/50	TC8802AX	Monitor Expansion Bay, 220V, 50Hz
LTC 8805/60	TC8805	Power Supply, 120V, 60Hz
LTC 8805/50	TC8805X	Power Supply, 220V, 50Hz
LTC 8821/00	TC8821	Video Input Module, for LTC 8800 System
LTC 8834/00	TC8834	Video Output Module, for LTC 8800 System
LTC 8859/00	TC8859	PC Software Package, for LTC 8800 System
LTC 8810/00	TC8810A	CPU Module, for LTC 8801 Bay
LTC 8816/00	TC8816A	Data Receiver Module, for LTC 8802 Bay
LTC 8808/00	TC8808	Video Interconnect (Patch) Panel
LTC 8809/01	TC8809	16-conductor ribbon cable, 3 ft. length
LTC 8809/00	TC8809-6	16-conductor ribbon cable, 6 ft. length
LTC 8820/00	TC8820SE	Service Extender Card, for LTC 8821
LTC 8779/00	TC8779SE	Service Extender Card, for LTC 8810, LTC 8816, LTC 8834

LTC 8600	TC8600	Allegiant® Microprocessor-Based Video Switcher/Control Systems
LTC 8601/00	TC8601R	Equipment Rack, for LTC 8601 Bay
LTC 8601/60	TC8601A	Main Switching Bay, 120V, 60Hz
LTC 8601/50	TC8601AX	Main Switching Bay, 220V, 50Hz
LTC 8621/00	TC8621	Video Input Module, for LTC 8600 System
LTC 8834/00	TC8834	Video Output Module, for LTC 8600 System
LTC 8659/00	TC8659	PC Software Package, for LTC 8600 System
LTC 8610/00	TC8610A	CPU Module, for LTC 8601 Bay

LTC 8300	TC8300	Allegiant® Microprocessor-Based Video Switcher/Control Systems
LTC 8301/60	TC8301	Main Switching Bay, 120V, 60Hz
LTC 8301/50	TC8301X	Main Switching Bay, 220V, 50Hz
LTC 8359/00	TC8359	PC Software Package, for LTC 8300 System

LTC 8500	TC8500	Allegiant® Microprocessor-Based Video Switcher/Control Systems
LTC 8501/00	TC8501R	Equipment Rack, for LTC 8501 Bay
LTC 8501/60	TC8501C	Main Switching Bay, 120V, 60Hz
LTC 8501/50	TC8501CX	Main Switching Bay, 220V, 50Hz
LTC 8521/00	TC8521VIM	Video Input Module, for LTC 8500 System
LTC 8532/00	TC8532VOM	Video Output Module, for LTC 8500 System
LTC 8505/60	TC8505PS	Power Supply, 120V, 60Hz
LTC 8505/50	TC8505PSX	Power Supply, 220V, 50Hz
LTC 8511/00	TC8511C	CPU Module
LTC 8559/00	TC8559	PC Software Package, for LTC 8500 System

LTC	TC	Allegiant® System Accessories
LTC 8550/00	TC8550A	Keyboard, Joystick Control
LTC 8551/00	TC8551A	Keyboard, Push Button Control
LTC 8552/00	TC8553-232	Keyboard, Variable Speed, RS-232, Joystick Control
LTC 8553/00	TC8553	Keyboard, Variable Speed, Joystick Control
LTC 8554/00	TC8554	Keyboard, Compact, Push Button Control
LTC 8555/00	TC8555	Keyboard, Compact, Variable Speed Joystick Control
LTC 8558/00	TC8557HL	Keyboard Cable, 100 ft.
LTC 8557/60	TC8557HR	Hook-up Kit for Remote Keyboard up to 5,000 ft, 120V.
LTC 8557/50	TC8557HRX	Hook-up Kit for Remote Keyboard up to 5,000 ft, 220V
LTC 9050/00	TC8557MK	Rack Mount Kit, for LTC 8550, LTC 8551, LTC 8553 Keyboards
LTC 8540/00	TC8540C	Alarm Interface Unit
LTC 8568/00	TC8568	Signal Distribution Unit, 32 Outputs
LTC 8768/00	TC8768	Signal Distribution Unit, 64 Outputs
LTC 8569/60	TC8569-2	Code Merger Unit, 2-Channel, 120V, 60Hz
LTC 8569/50	TC8569X-2	Code Merger Unit, 2-Channel, 220V, 50Hz
LTC 8570/60	TC8569-4	Code Merger Unit, 4-Channel, 120V, 60Hz
LTC 8570/50	TC8569X-4	Code Merger Unit, 4-Channel, 220V, 50Hz
LTC 8571/60	TC8769-2	Code Merger Unit, 2-Channel, 120V, 60Hz
LTC 8571/50	TC8769X-2	Code Merger Unit, 2-Channel, 220V, 50Hz
LTC 8572/60	TC8769-4	Code Merger Unit, 4-Channel, 120V, 60Hz
LTC 8572/50	TC8769X-4	Code Merger Unit, 4-Channel, 220V, 50Hz
LTC 8560/60	TC8560-1	Receiver/Driver, 120V Supply, 120V to P/T, No Aux.
LTC 8562/60	TC8560-2	Receiver/Driver, 120V Supply, 24V to P/T, No Aux.
LTC 8562/50	TC8560X-2	Receiver/Driver, 220V Supply, 220V to P/T, No Aux.
LTC 8560/50	TC8560X-4	Receiver/Driver, 220V Supply, 220V to P/T, No Aux.
LTC 8561/60	TC8561A-1	Receiver/Driver, 120V Supply, 120V to P/T, with Aux.
LTC 8566/60	TC8561A-2	Receiver/Driver, 120V Supply, 24V to P/T, with Aux.
LTC 8566/50	TC8561AX-2	Receiver/Driver, 220V Supply, 220V to P/T, with Aux.
LTC 8561/50	TC8561AX-4	Receiver/Driver, 220V Supply, 220V to P/T, with Aux.
LTC 8563/20	TC8563	Receiver/Driver, 24V Supply, 24V to P/T, No Aux.
LTC 8564/20	TC8564A	Receiver/Driver, 24V Supply, 24V to P/T, with Aux.
LTC 8780/60	TC8780	Time/Date Converter Unit, GPS Format, 120V, 60Hz
LTC 8780/50	TC8780X	Time/Date Converter Unit, GPS Format, 220V, 50Hz
LTC 8781/60	TC8781	Time/Date Converter Unit, GPS Format, 120V, 60Hz
LTC 8781/50	TC8781X	Time/Date Converter Unit, GPS Format, 220V, 50Hz
LTC 8785/60	TC8785	Data Converter Unit, Var. Speed to Fixed Speed Code, 120V, 60Hz
LTC 8785/50	TC8785X	Data Converter Unit, Var. Speed to Fixed Speed Code, 220V, 50Hz
LTC 8712/60	TC8712A	Console Port Expander, 120V, 60Hz
LTC 8712/50	TC8712AX	Console Port Expander, 220V, 50Hz
LTC 8713/60	TC8713A	Alarm Port Expander, 120V, 60Hz
LTC 8713/50	TC8713AX	Alarm Port Expander, 220V, 50Hz
LTC 8714/60	TC8714A	Keyboard Port Expander, 120V, 60Hz
LTC 8714/50	TC8714AX	Keyboard Port Expander, 220V, 50Hz
LTC 8715/60	TC8715A	LTC 8714 Port Expander, 120V, 60Hz
LTC 8715/50	TC8715AX	LTC 8714 Port Expander, 220V, 50Hz
LTC 8059/00	TC8059	PC Software Package, for Satellite
LTC 8850/00	TC8850	Graphical User Interface (GUI) Package

IMPORTANT SAFEGUARDS

1. Read Instructions - All the safety and operating instructions should be read before the unit is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the unit and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Cleaning - Unplug the unit from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. Attachments - Do not use attachments not recommended by the product manufacturer as they may cause hazards.
7. Water and Moisture - Do not use this unit near water - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, near a swimming pool, in an unprotected outdoor installation, or any area which is classified as a wet location.
8. Accessories - Do not place this unit on an unstable stand, tripod, bracket, or mount. The unit may fall, causing serious injury to a person and serious damage to the unit. Use only with a stand, tripod, bracket, or mount recommended by the manufacturer, or sold with the product. Any mounting of the unit should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



9. Ventilation - Openings in the enclosure, if any, are provided for ventilation and to ensure reliable operation of the unit and to protect it from overheating. These openings must not be blocked or covered. This unit should not be placed in a built-in installation unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
10. Power Sources - This unit should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply you plan to use, consult your appliance dealer or local power company. For units intended to operate from battery power, or other sources, refer to the operating instructions.
11. Grounding or Polarization - This unit may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

Alternately, this unit may be equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
12. Power-Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
13. Power Lines - An outdoor system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outdoor system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal. U.S.A. models only - refer to the National Electrical Code Article 820 regarding installation of CATV systems.
14. Overloading - Do not overload outlets and extension cords as this can result in a risk of fire or electric shock.
15. Object and Liquid Entry - Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the unit.

16. Servicing - Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
17. Damage Requiring Service - Unplug the unit from the outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power-supply cord or plug is damaged.
 - b. If liquid has been spilled, or objects have fallen into the unit.
 - c. If the unit has been exposed to rain or water.
 - d. If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
 - e. If the unit has been dropped or the cabinet has been damaged.
 - f. When the unit exhibits a distinct change in performance--this indicates a need for service.
18. Replacement Parts - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
19. Safety Check - Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.
20. Coax Grounding - If an outside cable system is connected to the unit, be sure the cable system is grounded. U.S.A. models only--Section 810 of the National Electrical Code, ANSI/NFPA No.70-1981, provides information with respect to proper grounding of the mount and supporting structure, grounding of the coax to a discharge unit, size of grounding conductors, location of discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
21. Lightning - For added protection of this unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the cable system. This will prevent damage to the unit due to lightning and power-line surges.

FCC & ICES INFORMATION

(U.S.A. and Canadian Models Only)

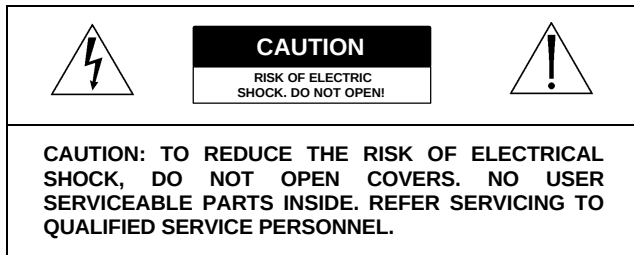
WARNING - This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules and ICES-003 of Industry Canada. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Intentional or unintentional changes or modifications not expressly approved by the party responsible for compliance shall not be made. Any such changes or modifications could void the user's authority to operate the equipment.

The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No.004-000-00345-4.

SAFETY PRECAUTIONS



This label may appear on the bottom of the unit due to space limitations.



The lightning flash with an arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Warning

To prevent fire or shock hazard, do not expose units not specifically designed for outdoor use to rain or moisture.



WARNING: Electrostatic-sensitive device. Use proper CMOS/MOSFET handling precautions to avoid electrostatic discharge.

NOTE: Grounded wrist straps must be worn and proper ESD safety precautions observed when handling the electrostatic-sensitive printed circuit boards.

Power



Power Disconnect. Units with or without ON-OFF switches have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON-OFF switch is in the ON position. The power cord is the main power disconnect for all units.



Disjonction de l'alimentation. Les appareils avec ou sans commutateurs ON-OFF sont alimentés à chaque fois que le cordon d'alimentation est branché à la source d'alimentation; toutefois, les appareils disposant de commutateurs ON-OFF ne fonctionnent que lorsque le commutateur ON-OFF est sur la position ON. Le cordon d'alimentation est la disjonction d'alimentation principale pour tous les appareils.



Netzanschluß. Geräte mit oder ohne Netzschalter haben Spannung am Gerät anliegen, sobald der Netzstecker in die Steckdose gesteckt wird. Das Gerät ist jedoch nur betriebsbereit, wenn der Netzschalter (EIN/AUS) auf EIN steht. Wenn man das Netzkabel aus der Steckdose zieht, dann ist die Spannungszuführung zum Gerät vollkommen unterbrochen.



Para Desconectar la Alimentación: Unidades no equipadas con interruptores ON/OFF, son alimentadas cuando el cable de alimentación es conectado a la corriente eléctrica. Las unidades equipadas con interruptores son alimentadas de igual forma, pero adicionalmente requieren que el interruptor esté posicionado en ON. El cable de alimentación es el medio principal de desconexión del equipo.

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UNPACKING

Unpack carefully. This is electronic equipment and should be handled carefully.

If an item appears to have been damaged in shipment, replace it properly in its carton and notify the shipper. If any items are missing, notify your Philips Communication & Security Systems Inc. Sales Representative or Customer Service.

The shipping carton is the safest container in which the unit may be transported. Save it for possible future use.

SERVICE

If the unit ever needs repair service, the customer should contact the nearest Philips Communication & Security Systems Service Center for authorization to return and shipping instructions.

Service Centers

U.S.A. & Canada: 800-366-2283
Mexico & Central America: 52-5-688-1466
Europe & Middle East: 44-1932-765666
South America: 54-1-956-0837
Australia: 61-2-888-9000
New Zealand: 64-4-237-7297

DESCRIPTION

This manual covers the installation and operation of the Allegiant® TC8500 Series, TC8600 Series, and TC8800 Series systems. When providing information that is common to all members of the Allegiant family, this manual will often use a part number of the form "TC8x00". The "x" indicates that this designation applies to all Allegiant systems. For example, information that refers to the TC8x01 main CPU bay is applicable to the TC8501, TC8601, and TC8801. A specific part designation (without the embedded "x") like "TC8802 Monitor Expansion Bay" will usually apply only to that particular series of the Allegiant family. An exception is that peripherals that are identical on all systems will often have a TC8500 Series part number. For example, the TC8550A Keyboard, the TC8568 Signal Distribution Unit, and the TC8569-2 Series Code Merger are used with all Allegiant systems even though they have a TC8500 Series part number.

All Allegiant systems can accommodate multiple keyboards, a computer system console port, and a logging printer output.

The TC8500 Series Allegiant system can handle up to 64 cameras and 8 monitors in a full crosspoint configuration. It can also accommodate 128 alarm points.

The TC8600 Series handles up to 128 cameras, 16 monitors, and 512 alarms.

The TC8800 Series handles 256 cameras, 64 monitors, and up to 1024 alarm points.

In addition, the Allegiant series have a "Satellite" configuration capability through which the system can communicate with up to 256 remote combinations of Allegiant systems or TC8112B Series and TC8124B Series switchers. More information on this capability is provided later in this manual.

The system can be operated in the simple default state (as it leaves the factory) or can be customized with our optional TC8850 Graphical User Interface Software package or our optional TC8x59 Master Control Software using an IBM™ or IBM compatible personal computer. Despite its sophistication, the Allegiant system is designed for the novice user. The ergonomic keyboard design contains many user-friendly but powerful functions. A user can choose from up to 60 sequences that are stored in memory, select any of the cameras to view on any of the monitors, and take exclusive control of remote pan/tilt camera functions right from the keyboard.

Each monitor can display a system status overlay showing alarm status, sequence conditions, time/date, and camera information.

User passwords can be utilized, providing an added measure of system security; and through the optional TC8850 Graphical User Interface Software package or the optional Master Control Software package, various lockout tables restricting user access to cameras, monitors, keyboards, and remote camera control are easily programmed. The TC8850 Graphical User Interface Software package and the Master Control Software package also contain up to 64 different time-activated events, providing automated control of video sequencing, monitor message broadcasts, receiver/driver functions, alarm control, and several other functions. The Allegiant series systems represent a dramatic breakthrough in CCTV switcher/controllers, and are backed by years of expertise in designing and manufacturing closed-circuit video equipment.

ALLEGIANTE FEATURE SUMMARY TABLE

The Allegiant system is available in two operating configurations: a base system and the base system with an optional PC based software package (either TC8850 or TC8x59). The base system includes features required for most switching/controller systems.

The addition of the optional TC8850 Graphical User Interface Software package or the optional TC8x59 Master Control Software package enables the user to customize the system's configuration using a menu driven program run on an IBM compatible personal computer.

The following table lists the various features available with each system:

Feature	Base Allegiant System	With Optional PC based Software
1. Full camera switching/control on all monitors	Y	Y
2. Multiple keyboards (8 with TC8500, 16 with TC8600, 32 with TC8800)	Y	Y
3. Multiple alarm inputs (128 with TC8500, 512 with TC8600, 1024 with TC8800)	Y	Y
4. 3 user-selectable pre-defined alarm response modes	Y	Y
5. Full control of on-site receiver/drivers	Y	Y
6. SalvoSwitching [®]	Y	Y
7. 60 programmable sequences	Y	Y
8. Alarm call-up of pre-position scenes	Y	Y
9. RS-232 interface ports for Computer, Logging Printer, etc.	Y	Y
10. Keyboard Log-on/Log-off function	Y	Y
11. User-selectable password security	Y	Y
12. Designate 16-character camera titles and 12-character monitor titles	Y	Y
13. Select time/date format	Y	Y
14. Local keyboard test function	Y	Y
15. Table and Sequence printout feature	Y	Y
16. Designate RS-232 communication parameters	Y	Y
17. Integral video loss detection (TC8600 and TC8800)	N	Y
18. Satellite configurations	N	Y
19. Restrict user/keyboard access to cameras	N	Y
20. Restrict user/keyboard access to receiver/drivers	N	Y
21. Restrict user access to keyboard	N	Y
22. Restrict user/keyboard access to monitors	N	Y
23. Designate user name and ID number	N	Y
24. Designate zoned alarm call-ups	N	Y
25. VersAlarm [™] alarm feature	N	Y
26. Designate displayed camera number	N	Y
27. Designate receiver/driver functions on alarm	N	Y
28. Program 64 Time Activated Events	N	Y
29. Designate receiver/driver functions in sequences	N	Y
30. Broadcast monitor messages	N	Y
31. Alarm title designation	N	Y
32. Personal computer displayed monitoring of system status	N	Y
33. Personal computer emulation of system keyboard	N	Y

In addition, all systems provide the capability to control on-site receiver/driver units including the AutoDome™ series of integral pan/tilt/zoom/camera dome series.

All systems contain a logging printer output port to which an inexpensive RS-232 serial printer may be attached. This provides a permanent record showing time and date of changes to the system status such as:

1. Incoming Alarms.
2. Acknowledgment of alarms by users.
3. Loading of sequences.
4. User log-on to keyboard or console port.
5. Console broadcast message.
6. Console transfer of system tables.
7. Activation of Time Event Functions.
8. Power-up reset message.
9. Video loss message (TC8600 and TC8800 systems only).

The printer may also be used to provide a hard copy of all user programmed system configuration Tables and Sequences.

MAJOR SYSTEM COMPONENTS

TC8x01 Main CPU Bay

A modular equipment bay which contains the system's microprocessor module (TC8511C or TC8x10A), the power supply module (TC8x05), and several video input and video output modules (see below). Up to eight TC8550 Series keyboards may be connected directly to the CPU bay.

TC8802 Monitor Expansion Bay

Required in TC8800 systems having more than 32 monitors. This expansion bay contains a data receiver module (TC8816A), a power supply (TC8805), and additional video input and output modules. The monitor expansion bay can also accommodate up to eight additional keyboards.

TC8x21 Video Input Module

Individual cards placed in bays to accept inputs from cameras and other video sources.

TC8532, TC8834

Video Output Modules

Individual cards placed in bays to provide outputs to monitors and VCRs.

System Capabilities

These tables indicate the maximum number of video input and output modules that each equipment bay may hold, as well as the number of individual inputs or outputs supported by each of these modules.

TC8500

Up to 8 video input modules; 8 inputs per module.
Up to 4 video output modules; 2 outputs per module.
Total: 64 maximum inputs; 8 outputs.
Satellite configuration input capacity: 320.

TC8600

Up to 8 video input modules; 16 inputs per module.
Up to 4 video output modules; 4 outputs per module.
Total: 128 maximum inputs; 16 outputs.
Satellite configuration input capacity: 1152.

TC8800

Main Bay:

Up to 8 video input modules; 32 inputs per module.
Up to 8 video output modules; 4 outputs per module.
Subtotal: 256 inputs and 32 outputs on main bay.

Monitor Expansion Bay:

Up to 8 video input modules (duplicating modules on main bay).
Up to 8 extra output modules (providing 4 additional outputs each).
Subtotal: 32 extra outputs added on to the main bay's outputs.

Total:

256 maximum inputs; 64 maximum outputs.
Satellite configuration input capacity: 2304.

SUPPLEMENTARY SYSTEM COMPONENTS

The Allegiant accessory products provide many optional features to the base system. A brief description of accessory products is provided below. Complete specification information can be found in their respective product data sheets. All accessory products are designed to be compatible, where applicable, throughout the Allegiant series.

TC8550A System Keyboard

Full function system keyboard used for system control, programming, and pan/tilt/zoom operation. Includes integral pan/tilt joystick and zoom lens controls. Up to 8 keyboards are permitted on the TC8500 system. The TC8600 can accommodate up to 16. TC8800 systems can accommodate up to 32 keyboards. In TC8600 and TC8800 systems, keyboards above 8 are connected to the systems using TC8714A/TC8715A keyboard port expander accessory units described below.

TC8551A & TC8554 System Keyboards

These are function keyboards similar to the TC8550A except they contain four directional oriented, nonprotruding push buttons instead of a joystick for control over any pan/tilt equipped camera sites.

TC8553 & TC8555 System Keyboards

These are function keyboards similar to the TC8550A except they contain a proportional joystick for controlling the variable speed pan/tilt functions of the AutoDome series of integral pan/tilt/zoom/camera domes. Rotation of the joystick also provides control over the lens's zoom functions.

TC8553-232 System Keyboard

The TC8553-232 is a full function keyboard similar to the TC8550A keyboard except it utilizes RS-232 protocol for data communication. It provides the capability of remotely locating an Allegiant keyboard over a conventional RS-232 transmission medium such as phoneline modems, fiber optics, etc. Requires a full duplex RS-232 link capable of operating at 9600 baud. All other specifications are the same as TC8553 keyboards. The TC8553-232 keyboards connect to the Allegiant's main CPU bay via a TC8712A Series Console Port Expander. Up to four TC8553-232 keyboards may be connected to a single TC8712A Series unit. When used with dial-up type phoneline modems, the TC8553-232 keyboard provides a rudimentary dialing capability.

TC8557MK Keyboard Racking Kit

Rack mounting kit designed to provide vertical, horizontal or 30° inclined mounting for TC8550A, TC8551A, or TC8553 keyboards.

TC8557HL Keyboard Extension Cable

Six conductor extension cable carries data/power for remote TC8550A, TC8551A, or TC8553 keyboards up to 30 meters (100 feet) away from main CPU bay.

TC8557HR Series Keyboard Extension Kits

Interface kit used to remote TC8550A, TC8551A, or TC8553 keyboards up to 1.6 km (5000 feet) away from main CPU bay. Customer supplied 24 gage shielded-twisted pair (Belden 9841 or equivalent) required between main CPU bay site and keyboard site. Kit provides two junction boxes, interface cable, and appropriate keyboard power supply.

TC8568 Signal Distribution Unit

Main site control code distribution and line driver unit for communicating to Receiver/Drivers, Switcher Followers, and satellite systems. Provides 32 separate outputs for driving up to 256 remote devices. Either "star" or "daisy chain" wiring configurations may be used.

TC8768 Signal Distribution Unit

Same features and specifications as the TC8568 except that it contains twice the number of output connectors which provide 64 separate outputs for driving up to 512 remote devices.

TC8540C Series Alarm Interface Units

Alarm gathering unit which accepts up to 64 dry contact closures or logic level inputs from remote sensing devices such as door contacts, PIRs, etc. and then reports the 'alarm' information to the main CPU bay. Alarm inputs may be configured in groups of 32 to accept either normally open or normally closed contacts. The TC8540C provides eight relay outputs which can be used to drive external alerting devices or VCRs.

TC8560, TC8561A, TC8563, & TC8564A Series Receiver/Driver Units

Decodes data transmitted from TC8568 unit for camera site control of Pan/Tilt, Zoom Lens, pre-positions, and auxiliaries. Unit contains integral local test feature, auto-pan or random scanning, and is available in several input and output drive voltage versions.

TC700 Series AutoDomes™

Integral camera, high speed pan/tilt, zoom lens, and receiver/driver system in compact dome enclosure. Available in monochrome or color camera models. Various enclosure mounting options are available for indoor and outdoor applications.

TC8569-2, TC8569-4, TC8769-2, TC8769-4 Series

Code Merger Unit

Control code merger and line driver unit used to combine control code from two systems (up to four with TC8569-4 version) for communicating to Receiver/Drivers, Switcher Followers, and satellite systems. Provides 32 separate outputs capable of driving up to 256 remote devices. Either "star" or "daisy chain" wiring configurations may be used. Unit will accept signal input either from Allegiant main CPU bay, TC8568 output, or an output from another TC8569-2, TC8569-4. Multiple units may be cascaded to obtain additional outputs.

TC8770 Switcher Follower Series, TC8770SF, TC8770SG, TC8770LD, TC8770LG Function Modules

Accessory unit which provides relay contact closures or LED driver outputs corresponding to cameras displayed on system monitors. The TC8770 may be configured to follow non-alarmed video, alarmed video, or both. TC8770 card cage holds any combination of up to 8 TC8770SF, TC8770SG, TC8770LD, or TC8770LG modules. Each TC8770SF or TC8770SG type module contains 16 relay contact outputs. A single TC8770LD or TC8770LG type module drives up to 64 low current type LEDs.

TC8770I Interconnect Panel

Accessory for the TC8770 Switcher Follower which provides convenient screw terminal interface for external connections. Mates to ribbon cables supplied with TC8770SF or TC8770LD function modules.

TC8712A Series Console Port Expander Units

The TC8712A port expander interfaces to the RS-232 CONSOLE port of an Allegiant system to permit up to 4 external PCs or other computing devices to be connected to the system. This permits multiple PCs or computing devices to communicate with a single Allegiant system.

TC8713A Series Alarm Port Expander Units

The TC8713A interfaces to either a TC8600 or a TC8800 system's RS-232 ALARM port to permit additional TC8540C alarm interface units to be connected to the system. In a TC8600 system, 2 TC8540C units can be connected to the TC8713A. In TC8800 systems, up to 4 TC8540C units can be connected to the TC8713A.

TC8714A, TC8715A Series Keyboard Port Expander Units

The TC8714A keyboard port expander interfaces to the COMM PORT 2 of either a TC8600 or a TC8800 system to permit additional keyboards to be connected to the system. Any combination of up to 8 TC8550A, TC8551A or TC8553 keyboards can be connected to the system using one TC8714A unit. In TC8800 systems, typically 3 TC8714A units, each having 8 keyboards, can be interfaced to the system using a single TC8715A unit. This would provide a quantity of 24 "port expanded" keyboards in a TC8800 system for a total of 32 system keyboards. Alternatively all 32 keyboards can be connected using 4 TC8714As and a single TC8715A.

TC8780 Series Data Converter Units

The TC8780 Series convert the biphasic control code generated by Allegiant series matrix switchers and the TC8135 Series controller/followers into standard RS-232, and converts RS-232 back to biphasic code. This provides the capability of transmitting the biphasic control code over conventional RS-232 transmission media (phone modems, fiber optics, microwaves, etc.) The TC8780 can also be used to perform the Satellite Selector functions in Allegiant satellite system configurations and operate as a 15-channel remote signal distribution unit.

TC8781 Series Time/Data Converters

The TC8781 Series are accessory units that decode the Allegiant system's encoded time/date information generated on the biphasic control code line and convert it into an RS-422 format using the GPS format. This time/date information can be used to interface into external time/date inserter products (such as the Kalatel KTS-53-16), which are designed to be synchronized via a GPS signal. The electrical and mechanical specifications are the same as the TC8780 Series units.

TC8785 Series Code Converters

TC8785 Series units are designed for use in existing Allegiant systems which have been upgraded to operate the new AutoDome series of cameras. The TC8785 Code Converters are used to provide the source for the "fixed speed" control code when the system is generating the new "variable speed" control code preferred by the AutoDome cameras. The TC8785 Series Code Converter receives the "variable speed" control code from the Allegiant via its TC8568 Signal Distribution unit and converts it into the appropriate "fixed speed" control code. Outputs from the TC8785 Series Code Converter may be connected to older TC8561 Series receiver/drivers using existing field cables.

Code Translator Units

Code translators are available which can convert Allegiant control code to and from other manufacturer code formats. Contact your Philips local manufacturer's representative for additional information.

TC8808 Video Interconnect Panel

Optional accessory item which provides TC8600 and TC8800 systems with the capability of looping up to 32 video inputs per panel. This 'patch' panel contains 32 BNC connectors on its front for external video connections and two 16-contact ribbon connectors on its rear. Two 16-conductor ribbon cables are included for interfacing the patch panel to the video looping connectors on the TC8600, TC8800 equipment bays. The patch panel is one standard EIA 19-inch rack unit high and one unit wide.

TC8579SE Service Extender Card

Service extender card used for troubleshooting TC8500 system CPU, video input, and video output modules

TC8779SE Service Extender Card

Service extender card used for troubleshooting TC8600 and TC8800 CPU and video output modules and all TC8700 modules.

TC8820SE Service Extender Card

Service extender card used for troubleshooting TC8600 and TC8800 system video input modules.

TC8x59 Series Allegiant Master Control Software

The TC8x59 Series Allegiant Master Control Software consists of an IBM® or IBM compatible program which allows quick and easy configuration of standard system features. An appropriate Allegiant Master Control Software package exists for each type of Allegiant system, i.e., the TC8559 is used for TC8500 Series systems, the TC8659 is used for TC8600 Series systems, etc. The program provides advanced alarm and sequence programming in addition to other features which are not available using the system keyboard. An on-line real-time monitoring of system status and a keyboard emulation mode is also included.

Other standard Master Control Software features include: user passwords, lockout tables, 64 programmable time event functions, custom alarm responses using the VersAlarm™ alarm mode, and a keyboard emulation mode. In addition to the operational switching sequences normally inputted from the standard keyboard, much more complex switching sequences may be programmed which incorporate remote control commands as part of the switching sequence. The ability to detect video loss in TC8600 Series and TC8800 Series systems and to monitor the system operation in real-time on all systems is a standard feature of the Allegiant Master Control Software package.

The TC8x59 Software package includes a 3 1/2-inch program disk containing Allegiant Master Control

Software program, interface cable, and Users Manual for custom programming of Allegiant system.

A special version, the TC8059, includes multiple disks for programming TC8500 Series, TC8600 Series, and TC8800 Series Allegiant systems. The TC8059 software package is intended to be used for programming a mix of Allegiant systems operating in a Satellite configuration.

The master control software program requires an IBM PC or true IBM compatible PC with at least 640 k bytes of memory, DOS 3.0 or higher, one serial port, one parallel port, and MDA, Hercules™, CGA, EGA, or VGA display (or compatible).

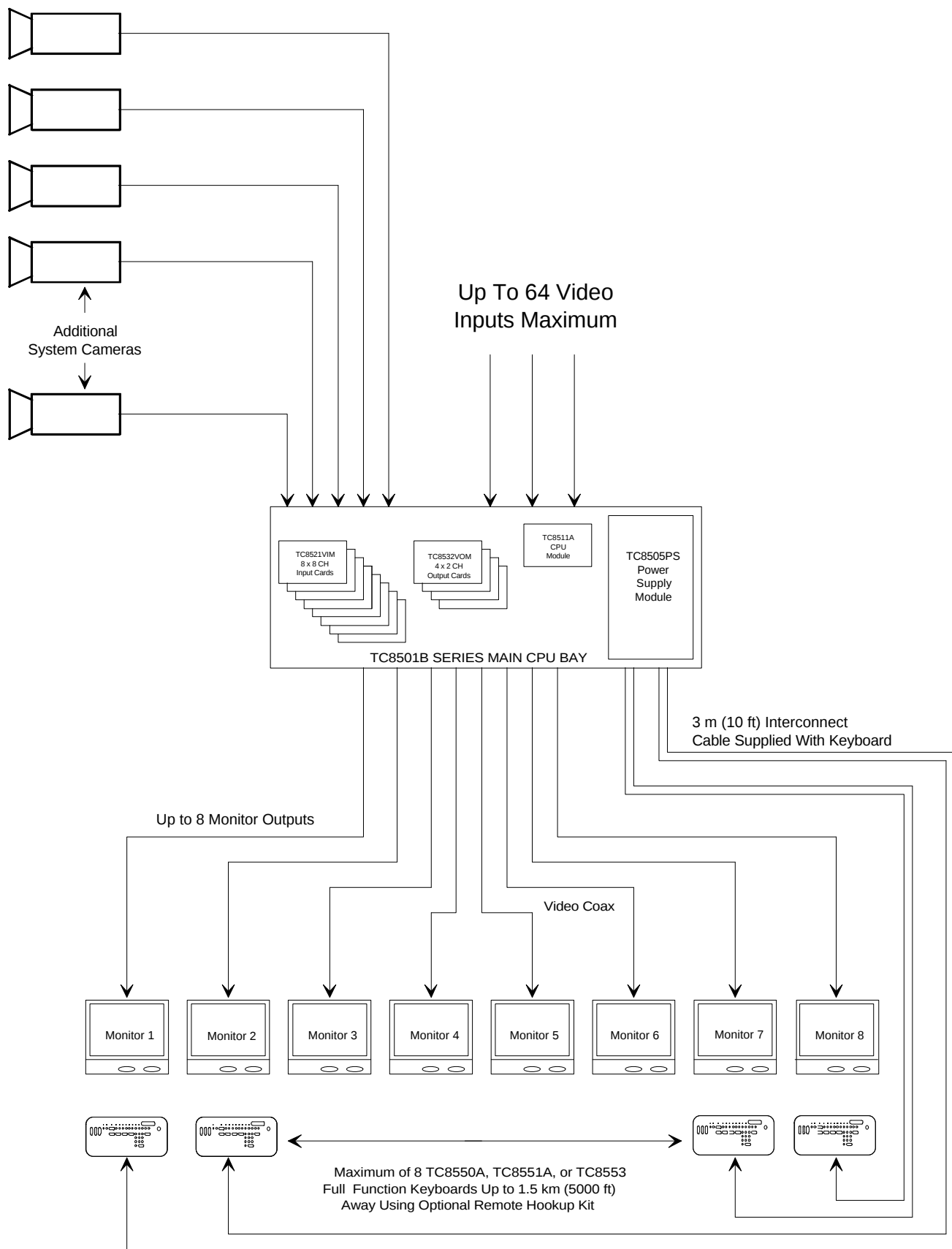
Windows Based Allegiant Software

The TC8850 is a software package utilizing a Graphical User Interface (GUI) to integrate and control security systems. The GUI interfaces directly to the Allegiant system and provides complete control and programming of all system features. The GUI software program requires an 486DX2-66 MHz PC or better running Windows 95 or Windows NT with at least 16Mbytes of memory, one serial port, one parallel port, 3.5" floppy disk drive, mouse or trackball, and SVGA display. Refer to the TC8850 data sheet for complete specifications.

Windows is a registered trademark of Microsoft Corporation.
IBM is a registered trademark of IBM Corporation.
Hercules is a trademark of Hercules Technology.

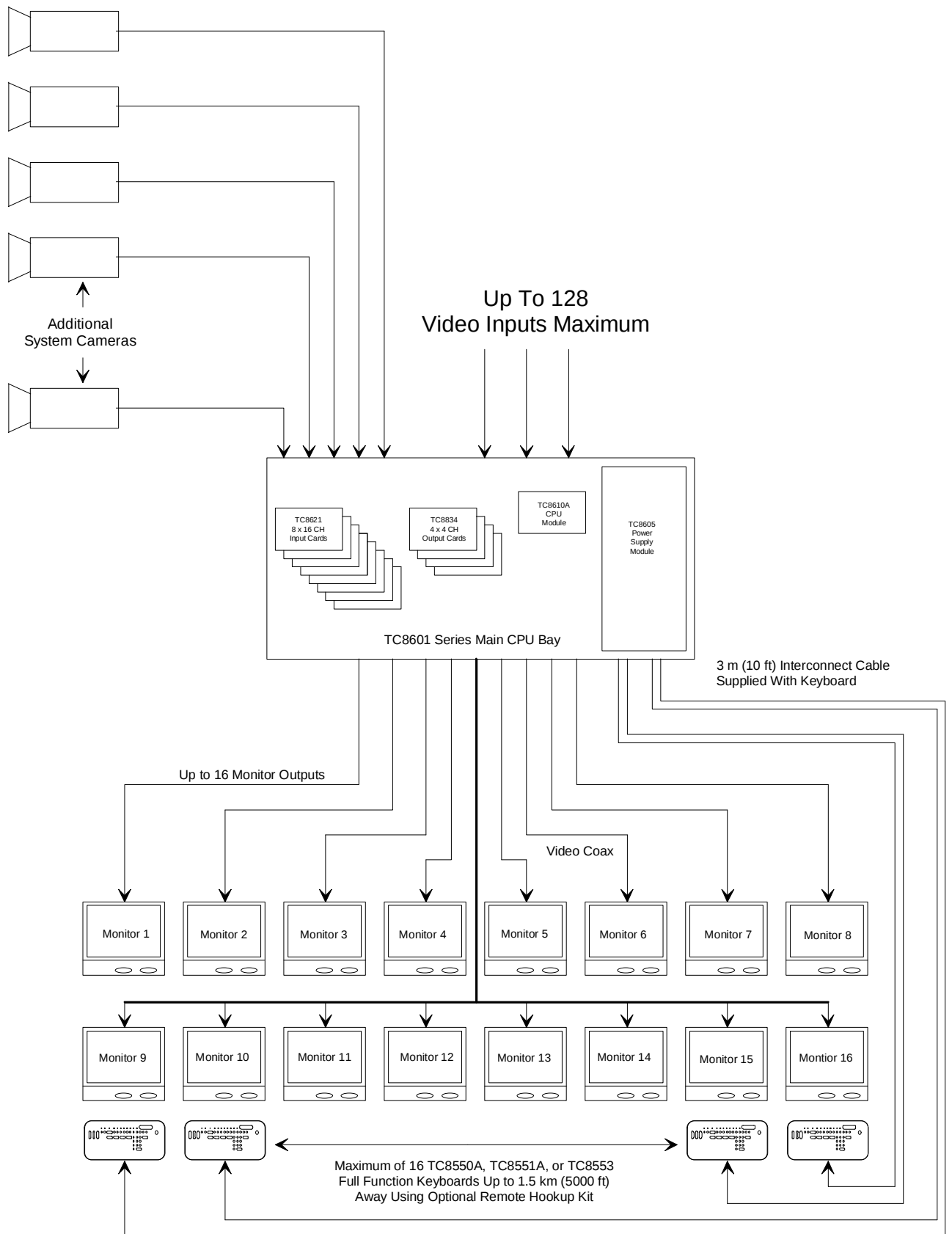
Logging Printer

An optional RS-232 serial printer may be connected to the main CPU bay to provide a permanent record of significant changes in the system's status. Time and date is printed for system events such as alarms, start-ups after power failures, sequence loadings, operators logging-on/off to keyboards, and downloading of information from the optional Master Control Software package. The printer may also be used to obtain hard copies of all system Tables and Sequences.



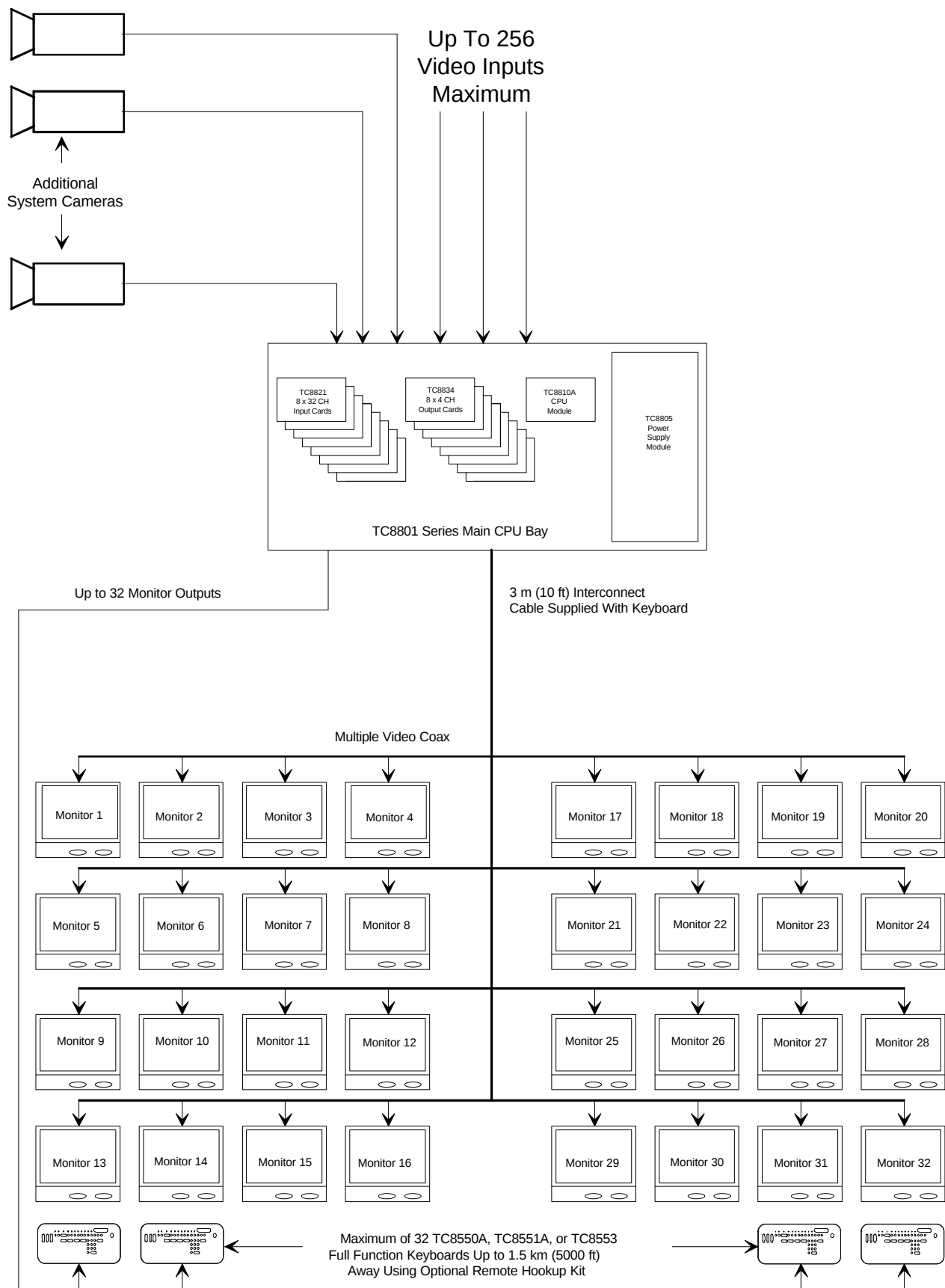
S9506028AE

TC8500 Video Switching System

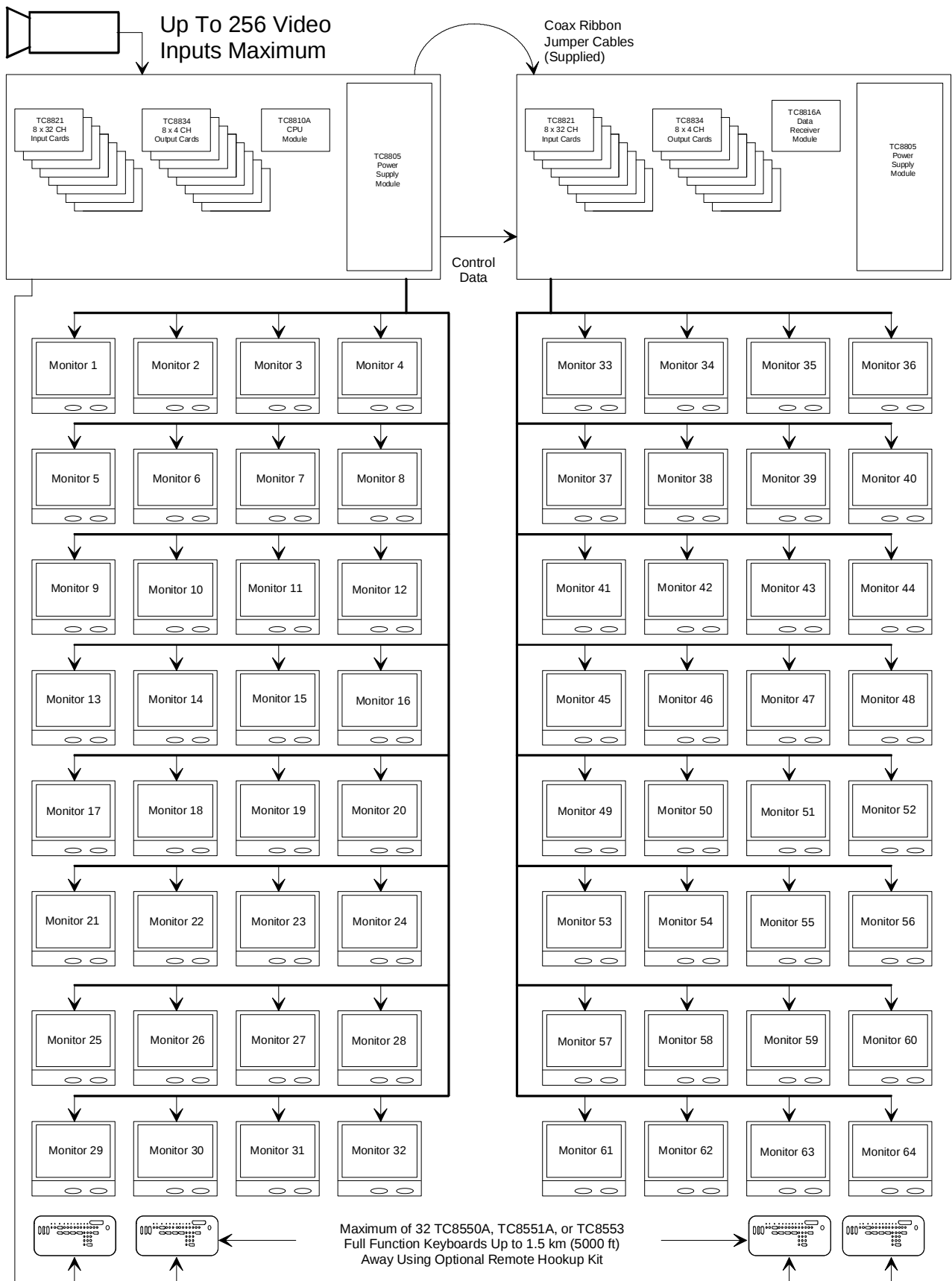


TC8600 Series Video Switching System

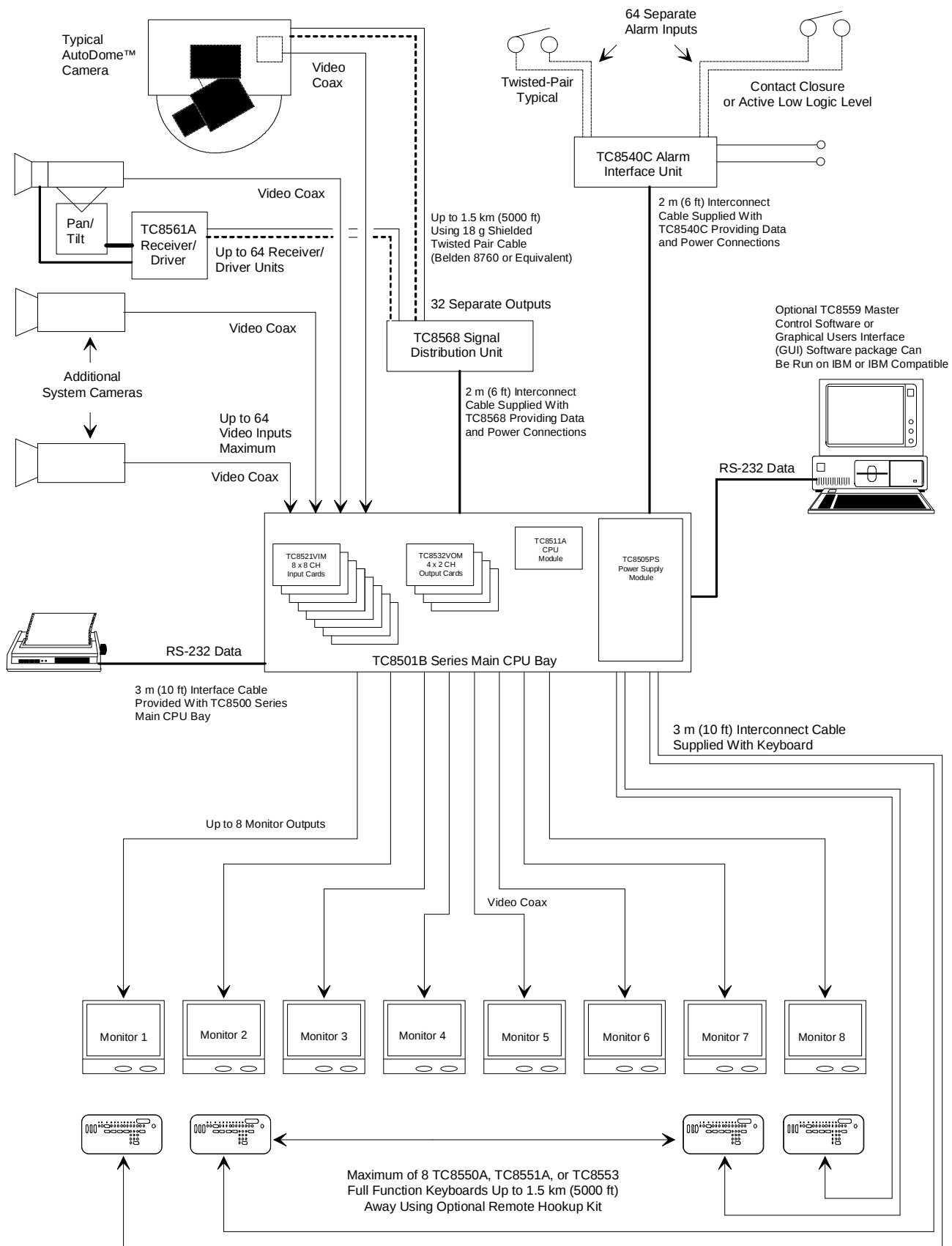
S9506029AE



**TC8800 Series Single Bay System
(256 by 32 Configuration)**

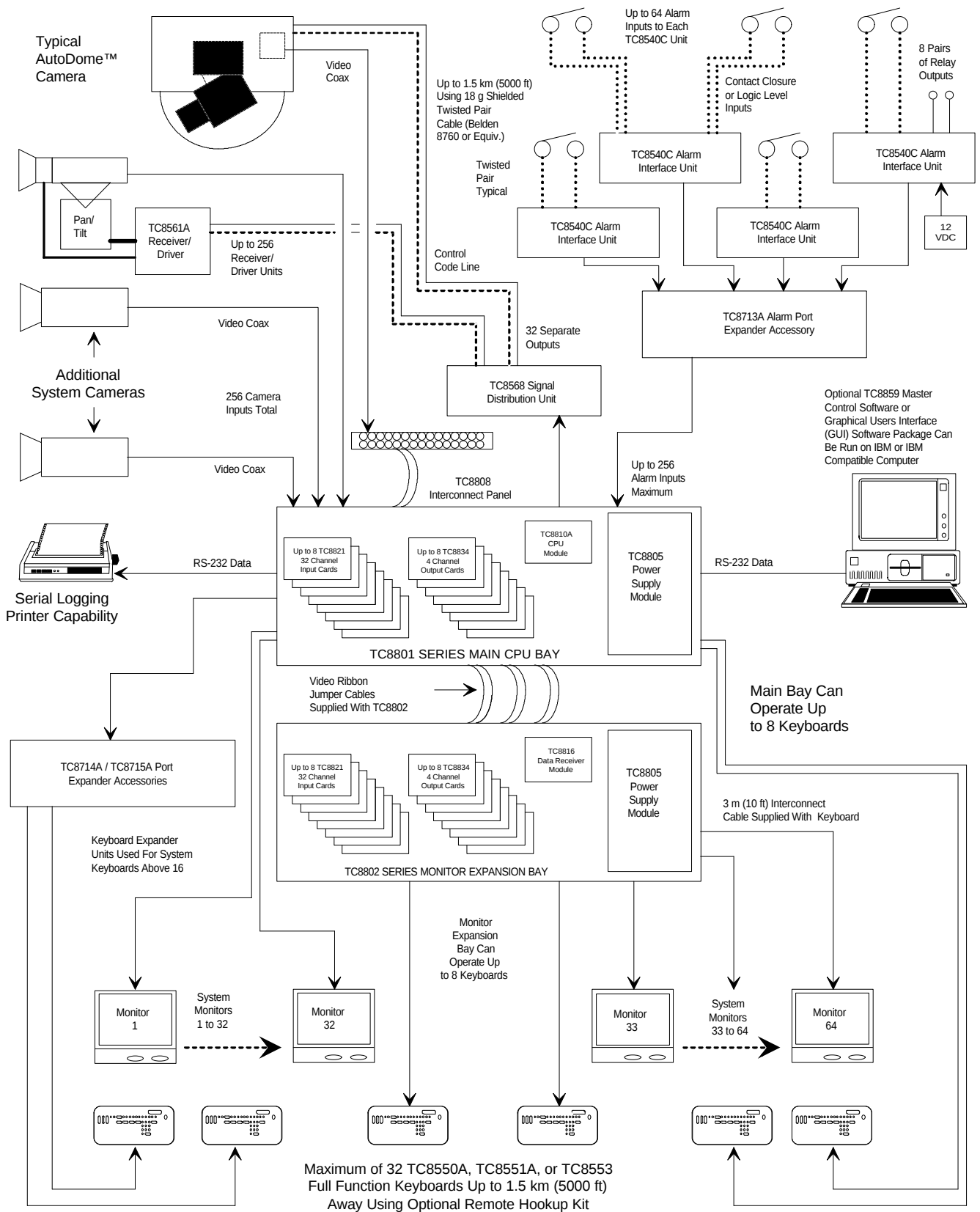


**TC8800 Series Dual Bay System
(256 by 64 Configuration)**



S9506032AE

TC8500 Full Capacity Configuration



S9506033AE

TC8800 Full Capacity Configuration

INSTALLATION PROCEDURE

CAUTION: Do Not Apply power to equipment until instructed to do so.

Main CPU Bay Installation

Before discarding the shipping cartons, verify that the various pieces of equipment have no evidence of carrier damage.

Remove the front panel of the main CPU bay (TC8x01) and the front panels of any supplied expansion bay (TC8802) by loosening the 4 corner fasteners.

Install power supply (TC8x05) in far right position of the TC8x01 main CPU bay insuring proper alignment and seating of the module into the rear mating connector. Verify power supply ON/OFF switch is in the OFF position. Repeat procedure for any supplied TC8802 monitor expansion bay.

Install 4 supplied screws and star washers on the rear panel of the bay(s) surrounding the power supply line cord. This fastens the power supply securely in place.

CAUTION: IF THE ALLEGIANT CARD CAGE IS TO BE TRANSPORTED, THE MAIN POWER SUPPLY SHOULD BE REMOVED TO PREVENT POSSIBLE DAMAGE TO THE BAY'S INTERNAL PARTS.

If the bay(s) are to be installed into a standard 19-inch EIA rack, remove the 4 rubber bumper foot pads found on the bottom of the bay before trying to install it. Four holes are provided for mounting the bay(s) in the rack. If any TC8802 expansion bays is supplied, it should be located as close as possible to the TC8801 main CPU bay to facilitate cable interconnections.

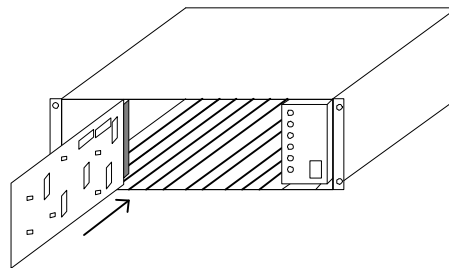
The TC8601, TC8801, and TC8802 bays should be installed such that there is at least 9 cm (3.5 inches) of clearance above and below the bay. This is necessary to allow for proper cooling of the system. Failure to provide proper clearance may cause the equipment to exceed its recommended operating temperature range.

NOTE: A TC8802 BAY SHOULD BE LOCATED CLOSE ENOUGH TO THE TC8801 SO THAT THE SUPPLIED 2 METER (6 FOOT) DATA INTERCONNECT CABLE (TO BE ATTACHED LATER) CAN BE USED.

Video Input Modules

For TC8600 and TC8800 systems, termination switches on the Video Input Modules (VIM) must be set to the correct position prior to installation. Read the termination instructions (section Camera and Monitor Connections, subsection Termination) prior to actually installing the Video Input Modules on these systems.

The appropriate number of Video Input Modules (TC8x21 or TC8521VIM) should be installed in the TC8x01 main bay starting with the left most slot. If the TC8802 Monitor Expansion Bay is being used, it should receive the same number of Video Input Modules as the main bay. If less than full capacity is being used, the modules should be inserted in a left-to-right manner so that the lower camera numbers are used up first.

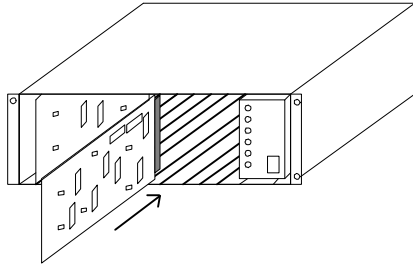


Typical Video Input Module Insertion

To insure full crosspoint capability, it is important that if the TC8802 is being used, both the TC8801 Main Bay and TC8802 Monitor Expansion Bay must be loaded up with the same number of modules (each bay receives half of the modules). The Video Input Modules are identical and are interchangeable within the designated VIM slots without having to make any changes to the module.

Video Output Modules

The next set of slots can contain up to 4 (8 on the TC8800) Video Output Modules (TC8834 or TC8532VOM). If counting from left to right, these are slots 9 to 12 for the TC8500 and TC8600, and 9 to 16 for the TC8800. Install the appropriate number of modules (starting at the left) into these slots. If fewer than the maximum number of Video Input Modules are installed, there will be empty slots between the Input and the Output Modules; make sure that the Output Modules are inserted into the correct slots.



Typical Video Output Module Insertion

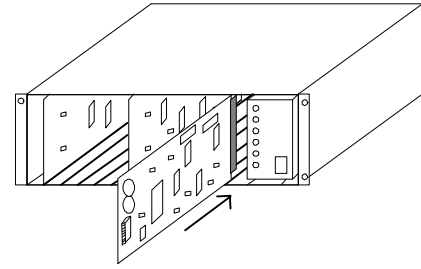
If the TC8802 Monitor Expansion Bay is being used, it should be loaded with Video Output Modules in the same fashion. The Main CPU Bay should be FULLY loaded with 8 Output Modules before putting Output Modules into the Monitor Expansion Bay. Remaining Output Modules are inserted into the Monitor Expansion Bay starting at slot 9 on a TC8802. If fewer than the maximum number of outputs are being used, the Monitor Expansion Bay may contain fewer Output Modules than the Main CPU Bay.

All Video Output Modules are identical and are interchangeable within the designated VOM slots.

CPU Module

The next slot over in the TC8x01 Main Bay will contain the system CPU module. This should be the right most slot adjacent to the power supply.

NOTE: THE CPU MODULE CONTAINS TWO LITHIUM BATTERIES MOUNTED ON THE COMPONENT SIDE OF THE PRINTED CIRCUIT BOARD. A **RED RECTANGULAR INSULATING TAG** MAY BE INSTALLED IN BETWEEN THE TOP OF THE BATTERIES AND THE BATTERY HOLDER CLIP. THIS TAG PREVENTS BATTERY DRAINAGE DURING STOCKING. **REMOVE TAG** IF SO EQUIPPED.



Typical CPU Module Insertion

If a TC8802 Monitor Expansion is supplied, it will contain a TC8816A Data Receiving Module in this slot. Install the appropriate CPU or Data Receiver Module at this time.

IMPORTANT: Verify that the settings of the two 8 position DIP switches located on the front edge of the CPU Module and the Data Receiver Module are set according to the table below.

Bay Type	Module	DIP Setting
TC8501C	TC8511C CPU	S1001, All OFF, S1002 switch 7 ON, All others OFF
TC8x01A	TC8x10A CPU	S100, All OFF, S101 switch 7 ON, All others OFF
TC8802A	TC8816A Data Receiver	S101 switch 3 and 7 ON, All others OFF

Camera and Monitor Connections

Refer to the rear panel diagrams on the following pages for the following steps.

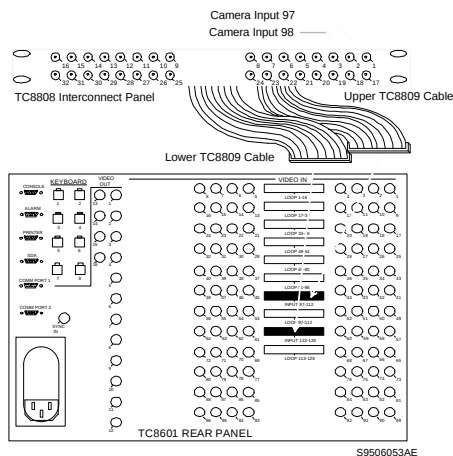
For All Systems

Connect system cameras to the appropriate video inputs, but as a minimum connect one known operating camera to video input #1 on the rear of the TC8x01 main CPU bay. Use only those inputs that correspond to an installed Video Input Module (VIM). Special instructions concerning TC8600 or TC8800 systems, termination, and expansion bays are given in the sections below. Also connect desired monitors to the rear of the TC8x01 bay, making sure to at least connect a monitor to video output #1. The video outputs are the left most column of BNC connectors on the rear of the bay. Use only those outputs that correspond to an installed Video Output Module (VOM).

TC8600 and TC8800 Video Inputs

The TC8601 and TC8801 main bays have only 96 direct BNC connectors available for video input. Cameras above 96 require the use of the TC8808 Video Interconnect ("Patch") Panel. Each patch panel provides 32 additional BNCs for video input. Patch panels are connected to the rear of the main bay using the supplied ribbon cables. Each cable can carry video for up to 16 cameras. Two cables can be attached to each patch panel to support up to 32 cameras per panel. Each ribbon cable should be attached to the appropriate "VIDEO" connector on the rear of the main bay. **The ribbon cable connectors contain a small "key" protrusion formed into one side of the connector to assure proper placement into the mating connectors. Be careful not to force the cables into the mating connectors backwards.** For example, the two ribbon cables from the first patch panel (supporting the thirty-two cameras 97 through 128) should be attached to the main bay connectors labeled "VIDEO 97-112" and "VIDEO 113-128." Extra connectors are provided on the main bay for "looping" purposes. If camera inputs are not being looped to other equipment, only one connector for each range of cameras (e.g., "VIDEO 97-112") needs to be connected.

The TC8600 system is supplied with one TC8808 (patch panel plus two TC8809 ribbon cables). This should be installed on the rear of the racking equipment to permit immediate or future connections of camera inputs 97 through 128.



Typical Use of TC8808 Video Interconnect Panel

The TC8800 system is supplied with TC8808s only if the number of TC8821 Video Input Modules ordered requires their use. Install any supplied TC8808 patch panels on the rear of the racking equipment. Note that additional TC8821 Video Input Modules ordered in the future may also require the use of TC8808 patch panels. Order appropriate quantities at the time the TC8821 Video Input Modules are ordered.

Termination Practices

Video from every camera should be "terminated" with a 75 ohm resistance. Each video line should be terminated exactly once. If video from a given camera is going to several different devices, only the last piece of equipment on the video line should be terminated. See the section below for special termination instructions when using a monitor expansion bay. Allegiant systems terminate their video inputs as follows:

TC8500 Terminations

Each TC8521VOM Video Input Module has resistors that terminate the video lines. If the user wishes that a video input be non-terminated so it may be used as a looping input, the VIM card must be modified. This modification can be done by the installer, as long as standard handling precautions are observed. Only competent technicians should attempt this procedure. For each video input that should be non-terminated, a resistor must be removed from the appropriate VIM card. These resistors are labeled as follows:

input 1 - R1	input 5 - R93
input 2 - R96	input 6 - R95
input 3 - R43	input 7 - R92
input 4 - R91	input 8 - R94

BNC "T" connectors must then be used to connect looping system cameras to the non-terminated inputs on the rear of the main CPU bay. A short piece of coax is recommended to connect the "T" to the bay.

TC8600 or TC8800 Terminations

Each VIM card for a TC8600 or TC8800 system has DIP switches for selecting the termination of each individual video line. To terminate an input line, make sure that the appropriate DIP switch on the VIM card is ON. If non-terminated operation is required for looping purposes, turn the switch OFF.

If looping video inputs are desired, the TC8600 and TC8800 systems may utilize the TC8808 patch panel kit. Both bays provide video looping connections which interface to the TC8808 patch panel using coax type ribbon cables supplied with the patch panel. Each TC8808 provides looping capability for up to 32 video inputs.

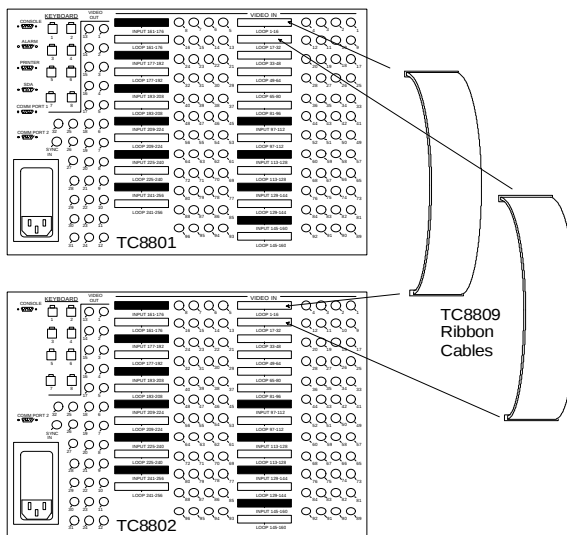
Just like camera inputs, monitor outputs on the Allegiant system are designed to be terminated. Each monitor output expects to be connected to a 75 ohm load. This is the regular load typically provided by a normal monitor. If a monitor output line is "looped" through several monitors or other equipment, the system installer should make sure that only the last unit on the line is terminated.

TC8802 Expansion Bay Connections

If a TC8802 monitor expansion bay is supplied, each camera that is connected to the TC8801 main CPU bay must also be connected to the same numbered input on the monitor expansion bay.

TC8802 Video Connections

With the TC8802 monitor expansion bay, ribbon cable connectors are provided for the video inputs. Video is to be looped from the main bay into the expansion bay through 16 TC8809 ribbon cables. Connect all TC8809 ribbon cables from the appropriate "VIDEO" ribbon cable connector on the main bay to the corresponding "VIDEO" ribbon cable connector on the monitor expansion bay. **The ribbon cable connectors contain a small "key" protrusion formed into one side of the connector to assure proper placement into the mating connectors. Be careful not to force the cables into the mating connectors backwards.** The DIP switches on the VIM cards installed in the main bay should be turned OFF. This will make the main bay inputs non-terminated, and the expansion bay will provide the termination for the video inputs.



Typical TC8809 Connections

TC8802 Data Connections

The TC8802 is supplied with a TC8716C2 data communication interconnect cable with two connectors spaced about 3 feet apart. Install the TC8716C2 cable between the Comm1 port on the TC8801 Main CPU bay, and the Comm1 port on the TC8802 monitor expansion bay.

Keyboard Hookup

Connect a maximum of 8 system keyboards to any of the 8 keyboard ports (modular phone type jacks) provided on the rear of the TC8x01 Main CPU bay, but be sure to at least connect a keyboard to port #1. The TC8500 is limited to these 8 keyboards. Other systems may accommodate 16 or 32 keyboards using TC8714A and TC8715A series keyboard port expander accessory units.

Additional keyboards may also be used with a TC8802A Series Monitor Expansion Bay. Connect the keyboards the same way as with the TC8801A Series Main Bay. DIP switches 2 and 3 of S101 on the Data Receiver module in the Monitor Expansion Bay must now be set according to the table below.

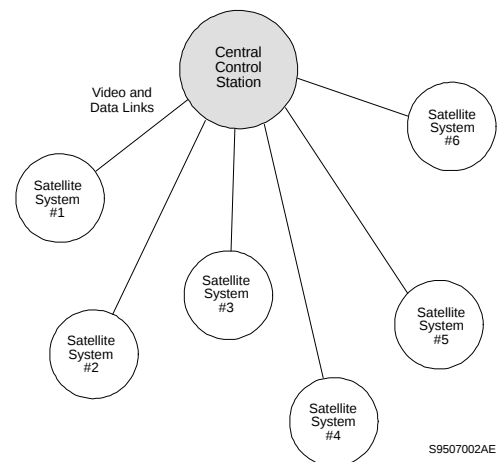
Desired Keyboard Numbers On Monitor Expansion Bay

Keyboards	Switch 2	Switch 3
None	OFF	OFF
9 to 16	OFF	ON (recommended setting)
17 to 24	ON	OFF
25 to 32	ON	ON

Each keyboard is supplied with a 10-foot cable for local hookups. The TC8x01 can provide power to keyboards up to 100 feet away using the optional TC8557HL hookup cable. For distances of up to 5000 feet, the optional TC8557HR hookup kit is required, which is supplied with a remote power pack and requires user-supplied shielded twisted pair (Belden 9841 or equivalent) for communication.

Satellite Configuration Installations

Due to the many variations possible, only general guidelines can be covered for installing satellite systems. Refer to the appendix section of this manual, the TC8850 Graphical User Interface Software manual or the TC8x59 Master Control Software package manual for additional configuration and programming information on satellite systems.



Satellite Concept Configuration

Satellite Site “Trunk Line” Monitor Outputs

At each of the remote satellite sites, a desired number of monitor outputs from the switcher must be assigned as Trunk lines. The number of Trunk lines can range from 1 to the maximum number of monitor outputs that the switcher provides. Note that the number of Trunk lines coming from a satellite site determines the maximum number of different cameras from that site that may be viewed simultaneously at the Main site. If operators will be stationed at the satellite site, they should be prevented from accessing the monitor outputs designated as Trunk lines. This can be accomplished via the Monitor Lockout tables using either the TC8850 Graphical User Interface Software package or the TC8x59 Master Control Software package (see below).

Main Site “Trunk Line” Video Inputs

At the main site, video Trunk line connections coming from each of the remote site(s) should be connected (and properly terminated) using any available video input at the main bay. There are no programming restrictions concerning their connections, but a sense of order can be maintained if a group of video inputs are used at the upper end of the system's designed capacity. This allows the main system to be more easily expanded in the future with either additional local cameras or additional Trunk lines. As an example, assume that there are a total of 8 Trunk lines coming from all satellite sites which will be connected to a main site system designed for 32 inputs. Inputs 25 to 32 can be reserved for the Trunk lines leaving inputs 1 to 24 for local camera connections. If there will be no local camera inputs, then the Trunk lines can start at the first video input.

Control Data Lines in Satellite Systems

Each satellite site must be provided with an Allegiant control data line coming from the Signal Distribution unit (usually a TC8568) at the Main site. This data line carries all pan/tilt/zoom control commands in addition to the switching commands generated by the Main site switcher. The control data line should be connected to a TC8780 Series Data Converter unit which will be used to provide the address decoding functions for the satellite site. A TC8780 Series unit is required at each satellite site and must be given a unique site address number.

If operators will be stationed at the satellite site and are permitted to control pan/tilt/zoom equipped cameras, a TC8569-2 Series Code Merger unit must be installed at the satellite site. The Code Merger will combine the code generated by the main site and the satellite site so both sites have control over pan/tilt/zoom equipped cameras located at the satellite site. The TC8780 Series unit can then be

connected to one of the data outputs of the TC8569-2 Series unit.

Satellite Site Programming Requirements

The optional TC8850 Graphical User Interface Software (GUI) package or the TC8x59 Master Control Software (MCS) package is required to properly program a satellite system. With the TC8x59 Master Control Software, it is necessary that an appropriate version of the program be available for each type (TC8300 Series, TC8500 Series, TC8600 Series, and/or TC8800 Series) of Allegiant system being used in the system.

If a single Master Control Software package is purchased, its security device and cable can be used with any of the program disks which are now supplied with a system's CPU module to properly configure a Satellite system.

Programming the satellite sites is usually limited to designating their 'logical' camera numbers to appropriate values via the Camera ID Table of the GUI or MCS. If TC8112B Series or TC8124B Series are being used as satellite switchers, the starting camera number can be designated using their on-screen programming menus.

THE STARTING CAMERA NUMBER SHOULD NOT BE CHANGED IN TC8112B OR TC8124B SERIES SITES WHERE LOCAL PAN/TILT/ZOOM EQUIPPED CAMERAS WILL BE USED SINCE THE TC8135B SERIES CONTROLLER FOLLOWER CAN ONLY ADDRESS NUMBERS FROM 1 TO 24.

Note that there can be no duplicate camera numbers anywhere in the system. Allegiant logical camera designations can be renumbered to any four digit number on TC8300, TC8600 Series or TC8800 Series systems, and any three digits on TC8500 systems. Only two digit camera numbers can be selected with TC8112B or TC8124B Series switchers. There are few other restrictions. These camera numbers will be the numbers entered at both the satellite and the main site keyboards when camera selections are made. On any pan/tilt/zoom equipped camera, this logical number must also be entered as the receiver/driver's site address number.

To maintain a sense of order, it is generally preferable if a satellite is programmed for a range of camera numbers. For example, in a three Allegiant type satellite system, the first satellite can be programmed for camera numbers 1 to 50. Satellite two can be programmed for camera numbers 101 to 131, and satellite three can use numbers 201 to 225.

If necessary, the GUI or MCS software's Keyboard-to-Monitor Lockout Table can be programmed in the satellite switcher to prevent any local operators from inadvertently accessing the satellite's monitor outputs being used as Trunk lines. Once TC8112B/TC8124B Series switchers are configured for satellite operation (via their on-screen menu

setup), the monitor outputs being used as Trunk lines are automatically disabled from local control as soon as the first commands are received from the main site.

If operators will be stationed at the satellite site, camera titles should be entered into the switcher. If desired, these titles can be selected (explained below) to appear at the main site.

The only other requirement is to ensure that the Console ports of all Allegiant type satellites have their handshake option disabled (CTS = off). This is done via the GUI software, the MCS's Parameters-System screen, or via the system's Keyboard User Functions (as described later in this manual). This requirement does not apply to TC8112B/TC8124B Series switchers.

Main Site Programming Requirements

At the main site, the GUI or MCS program's Camera ID table must be configured to ensure proper satellite operation. Usually it is easiest to start with the Trunk line inputs. For each Trunk line, the satellite's monitor output number and its 'Bay' address (the same number the satellite's TC8780 Series unit is set to) must be entered.

Camera numbers should be programmed next. Note that no duplicate camera numbers are allowed anywhere in the entire system. Remote cameras (those located at the satellite sites) should be designated using numbers above those corresponding to the main bay's physical video inputs (32+ on TC8300, 65+ on TC8500, 129+ on TC8600, 257+ on TC8800). Enter the desired camera number, the Satellite Bay that it is actually connected to, and select if either a local title will be used or if the remotely generated title will be used. For the satellite camera entries, only those numbers which represent

actual cameras need to be entered. For example, all 12 cameras associated with a 12-position TC8112B switcher do not need to be entered if only 5 cameras are actually connected to the switcher. If desired, a few extra camera numbers may be included at this time if the satellite site will be expanded in the future. If a local title is specified, the camera's title can also be entered at this time. Designate any local camera numbers appropriately and enter their corresponding titles. Note that either a local camera or a remote camera programmed with a local title will need to be selected to view certain on-screen prompts or data during programming of the main site via a system keyboard.

Once the system is programmed and configured, any unused monitor outputs (those with no physical monitors connected to them) located at the main site should be selected to display a local camera via the system keyboard. This prevents unused monitor outputs from using up Trunk lines which may result in some confusing operational responses.

Alarm Inputs in Satellite Systems

Any alarm inputs to the main site which have been programmed to activate cameras located at satellites will operate in the 'normal' way except when limited by the number of Trunk lines available. The software will automatically determine Trunk usage depending upon the priority level of operators currently viewing satellite cameras. **Note that alarm inputs applied at a satellite site will NOT activate alarm video at the main site.** If the application requires alarms located at a satellite to activate video at the main site, then the remote alarms must be brought back to the main site. In some cases, the main site's TC8540C Alarm Interface unit can be remotely located via a RS-232 link. If more than one satellite site contains alarms, then multiple TC8540C alarm interfaces can be remotely located. The number of alarm interfaces which can be remoted is only limited by the capacity of the main site system to support this capability.

Feature Selection

Certain user-selectable features can provide enhanced Allegiant system operation capabilities. Any desired changes can be made now or delayed until specific system requirements become more apparent. Refer to the section on FACTORY DEFAULT SETTINGS for a full description of these features and selection instructions.

Main Power Connections

Install supplied AC power cord(s) between the bay(s) and appropriate AC power source. Verify that power supply is configured for desired voltage input. If necessary, instructions for changing the input voltage selection can be found in the Maintenance section of this manual. Switch power ON to the bay(s). In multibay systems, the bays can be powered up in any order.

NOTE: The system may require several seconds to fully initialize after a power-up reset. Up to 1 minute may be required before a TC8802 monitor expansion bay fully initializes. This time can vary based on the activity and general size of the system.

Verify that the LEDs associated with the fuses are lit on all of the applicable power supplies.

NOTE: UPON POWER UP, THE SYSTEM MONITORS WILL MOMENTARILY DISPLAY VIDEO OUTPUT MODULE SOFTWARE VERSION INFORMATION.

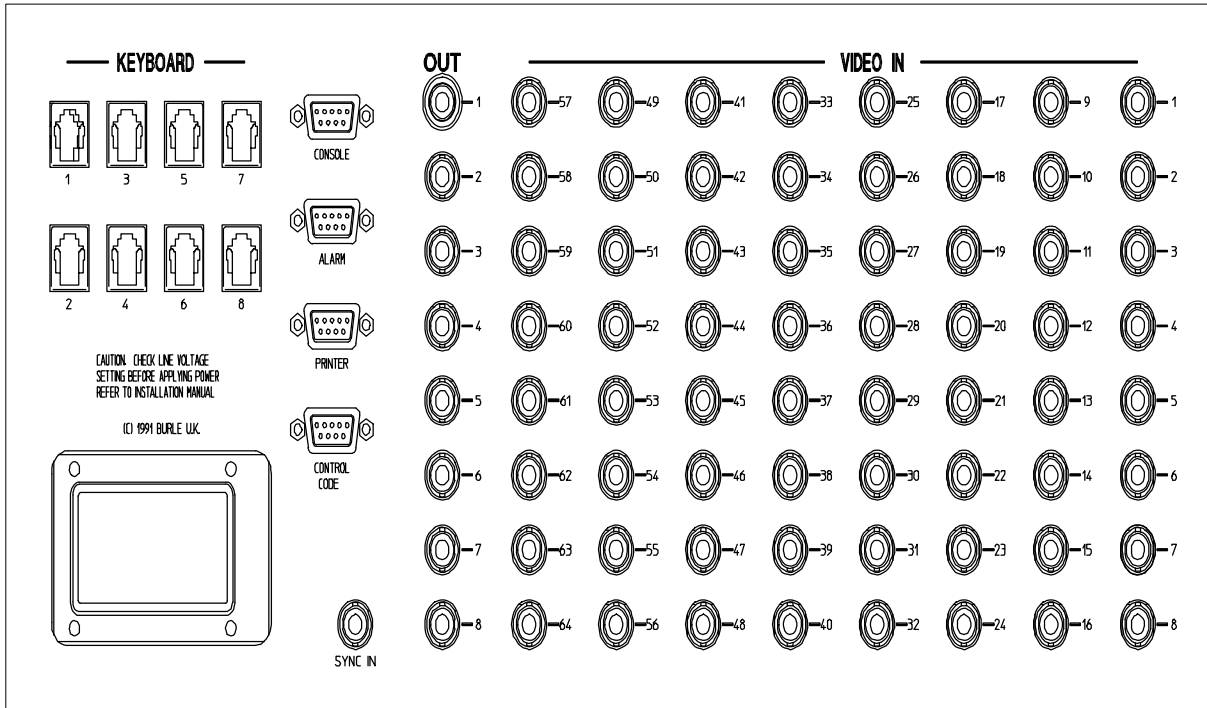
Installations having cameras powered from an AC phase different than that of the Allegiant system may utilize the built in EXTERNAL SYNC input or vertical PHASE ADJUST.

NOTE: ALL CAMERAS SHOULD BE PHASED PROPERLY WITH EACH OTHER BEFORE THE EXTERNAL SYNC OR PHASE ADJUST FEATURE IS IMPLEMENTED.

The EXTERNAL SYNC input will accept composite video, composite sync, or the output of a Master Sync generator. Any one of the phased cameras may be used as a master sync source to the system using the EXTERNAL SYNC input. To implement this feature, simply connect the incoming video source (using a BNC "T" connector) to both the appropriate camera BNC input and the EXTERNAL SYNC input which is found on the rear of the TC8x01 main CPU bay. The EXT SYNC LED on the front panel of the power supply will light. Alternatively, the PHASE ADJ on the front panel of the power supply may be adjusted until vertical interval switching is achieved. The PHASE ADJUST has a range of about 130 degrees.

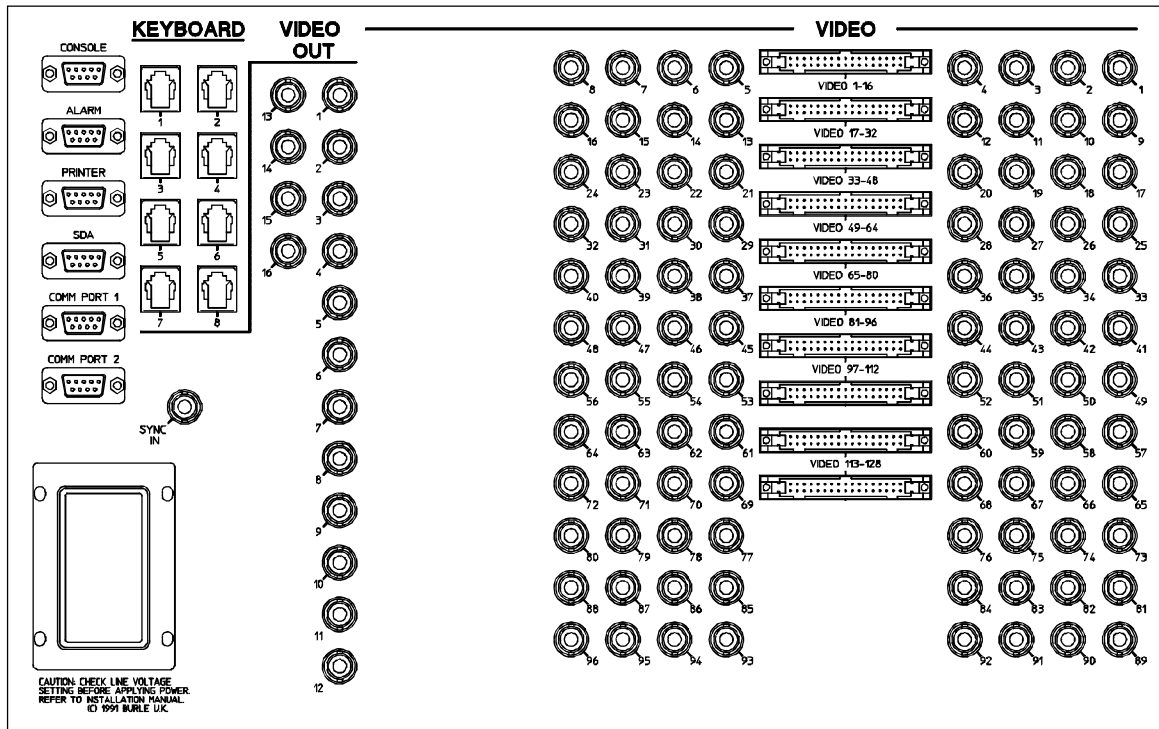
Reattach the front panel(s) to the bay(s).

Proceed to the next applicable accessory installation section or immediately to the appropriate system operating instruction section.



S932A17AE

TC8501 Series Back Panel Artwork



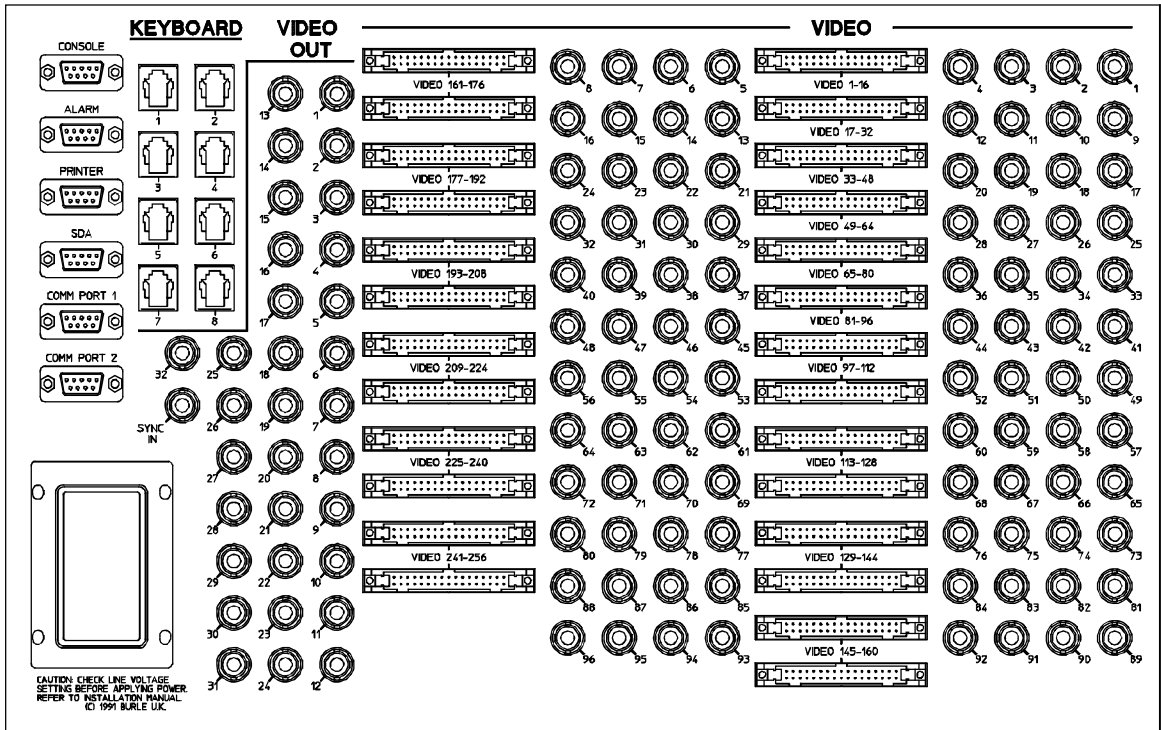
S932A18AE

TC8600 Series Back Panel Artwork



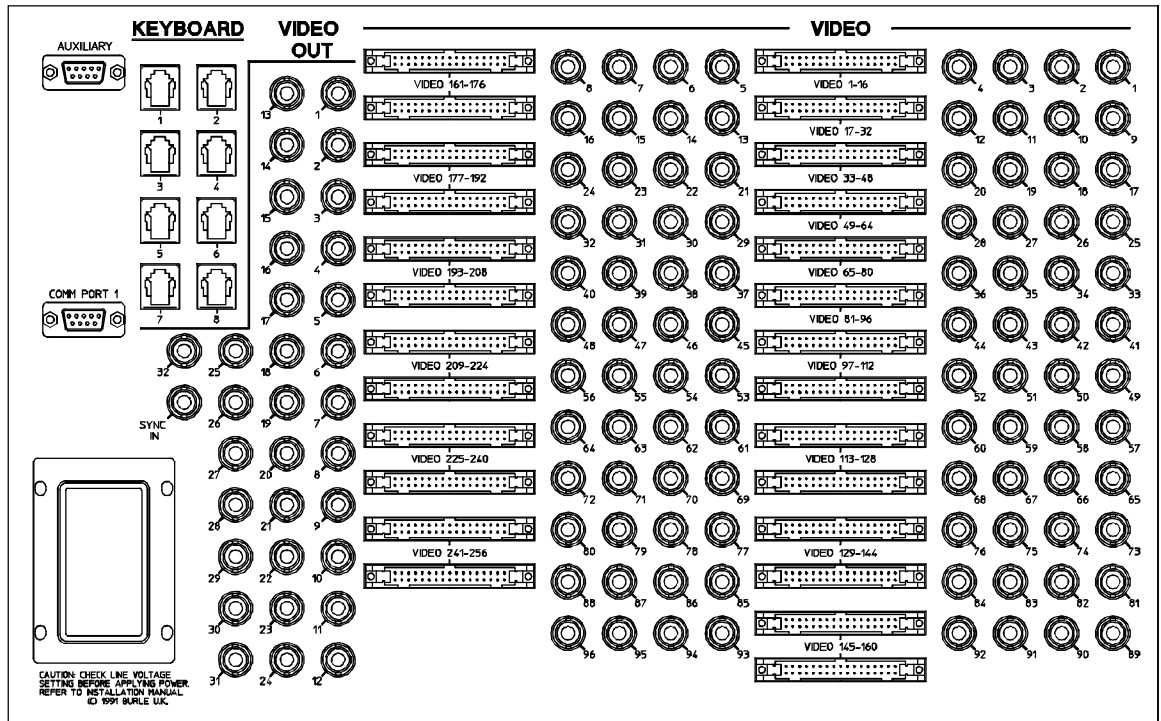
00000000

TC8808 Series Panel Artwork



TC8801 Series Back Panel Artwork

S932A19AE



TC8802 Series Back Panel Artwork

S9508035AE

OPTIONAL ACCESSORIES

Logging Printer Option Installation

Note: Although the exact installation procedure for each printer varies, the following steps are generally required. Be sure to save the printer reference manual for procedures not covered.

Switch the main power OFF to the printer.

Install ribbon cartridge and paper if necessary.

Set any configuration switches for your particular printer to match the format provided by the TC8x01 system. Note that the system communication protocol can be changed using the Keyboard User Functions (described later in this manual), the optional TC8850 Graphical User Interface software, or the TC8x59 Master Control Software package, but the factory default values are as follows:

Baud rate -- 1200 (before CPU software revision 7.1)
Baud rate -- 19,200 (with CPU revision 7.1; MAR 1997)
Stop bits -- 1
Data bits -- 8
Parity -- None

NOTE: The required interconnect cable utilizes a custom pinout. Refer to the Appendix section of this manual for wiring details. Alternatively, the correct cable can be ordered separately using part number: LTC 8507/00.

Attach the 25-pin male D-type connector side of the RS-232 cable to the connector on the printer.

Attach the 9-pin male connector side of the cable to the TC8x01 main CPU bay connector marked "PRINTER".

Apply power to the printer.

Verify logging printer action by 'loading' a previously stored sequence into a monitor, activating an alarm, or performing a system reset. Any of these actions should cause printouts to occur.

IBM or IBM Compatible Computer Interface Installation

NOTE: Although the exact installation procedure for each computer varies, the following steps are generally required. Be sure to save the computer reference manual for procedures not covered here. Switch the main power off to the computer.

Attach the PC security key provided with the optional TC8850 Graphical User Interface software, or the optional TC8x59 Master Control Software kit to a 25-pin **parallel** port on the computer. An external device may now be connected to the port key, but it may have to be left powered on.

NOTE: The supplied interconnect cable utilizes a custom pinout. If it ever becomes necessary to replace the cable, it can be ordered separately using part number: LTC 8506/00. Alternatively, a cable can be configured using the information found in the Appendix section of this manual.

Attach one end of the supplied RS-232 interface cable to the TC8x01 main CPU bay connector marked 'CONSOLE'.

Attach the other end of the cable to an available **serial** port (COMM PORT 1 or COMM PORT 2) on the rear of the computer.

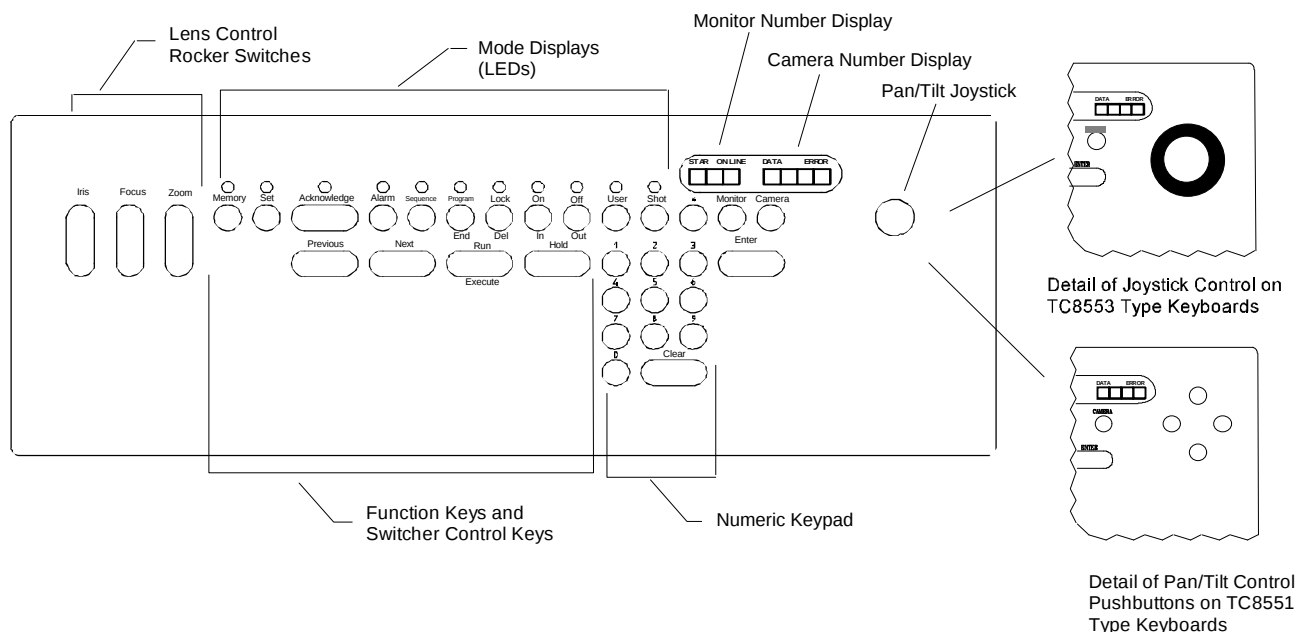
Apply power to the computer and allow it to boot up its operating system before inserting the software disc.

Refer to the TC8850 Graphical User Interface software manual, or the optional TC8x59 Master Control Software manual for complete programming instructions.

SYSTEM KEYBOARDS -

TC8550A, TC8551A, TC8553 Series

The various system keyboard displays and functions for the TC8550A, TC8551A, and TC8553 Series are described herein. Refer to the applicable keyboard diagrams as needed.



TC8550 Series Keyboards

S9506054AE

Keyboard Displays

Monitor Display

The monitor display is a three-digit seven-segment display that serves two purposes. One purpose is to display the number of the monitor that the keyboard is currently controlling. This monitor's camera number appears in the camera display, and the pan and tilt keys control camera movement if applicable. The second purpose is to provide a prompt to a user to log-on to the system if the log-on feature was enabled by the system installer. Once the user has logged on, the display reverts to the monitor number.

Camera Display

The camera display is a four-digit seven-segment display. It shows the number of the camera being viewed on the monitor that the keyboard is controlling. However, there are three modes for this display. The camera mode is the default, but when the user pushes one of the numeric data keys, this display

shows the numeric keystrokes as they are entered from the keyboard and also causes the DATA box above the camera display to light. If the keyboard remains inactive for about five seconds, the camera display will return to default mode and again display the camera number. The third mode is for error display (reference the Error Messages section of this manual). When the user enters an erroneous key sequence, the keyboard beeps and an error number is temporarily displayed (approx. 2 seconds). If an operator attempts to invoke a restricted function, the camera number will be temporarily replaced with an appropriate system error number. If an attempt is made to access a monitor or remote device which has been locked by a higher priority User, the camera number will be temporarily replaced with an appropriate error number, then the user number of the operator who placed the lock will be briefly displayed.

ON LINE Display

Directly above the camera display is the ON LINE display. The LINE part of the display indicates the keyboard is electrically connected to the Allegiant system. The ON display indicates the keyboard is ready to operate. If the ON display is not lit and the LINE is, the log-on feature of the system has been enabled by the system installer and the keyboard is waiting for a user to log-on to the system before operation is permitted.

ERROR Display

The ERROR display located above the monitor number display will light if a communication problem occurs between the keyboard and the system. It may also light briefly to indicate an error has occurred when an operator has attempted to perform an illegal or restricted activity.

Mode Displays

The Mode displays are various indicators that light up above certain keys to show the keyboard status. The keyboard will stay in a selected mode until all necessary data have been entered or until the system has timed out.

Keyboard Controls

The descriptions below indicate the function of the key in its own mode. A key may have other functions when used in complex modes. See the appropriate operation section.

Numeric Keypad

This keypad is used to enter numeric data. When the first numeric key is pressed, the camera display will become a data display, and indicate the numeric keys pressed.

Digits 0 to 9 - The numeric digits are general purpose keys used to enter numeric data. Any digit except a leading zero will appear on the camera display. The keyboard will only recognize four numeric digits at a time. If the data entered is not terminated in a command in about five seconds, the display will clear and again show the camera number.

CLEAR Key - The CLEAR key reinitializes the keyboard. In some cases it can be pushed twice. If there are numeric data in the camera display, the first push clears this data and the second push returns the keyboard to the camera mode. This allows the user to clear incorrect data without leaving the current mode. If there are no data in the camera display, the first push clears the entire keyboard back to the default state.

ENTER Key - The ENTER key terminates commands. It resembles the 'enter' key on a computer keyboard, and indicates the end of numeric

data entry. Holding this key when using the ON or OFF functions will cause those functions to repeat until the key is released.

Switcher Control Keys

The switcher control keys control the Allegiant switching and programming functions.

NEXT - This key serves two purposes. First, it sets a sequence of camera switches to run in a forward (ascending) direction. Second, it selects the next step when programming a sequence.

PREVIOUS - The PREVIOUS key has the same action as NEXT, except it sets a sequence to run in the backwards (descending) direction.

RUN / EXECUTE - The RUN key starts a sequence if one is currently 'loaded'. The EXECUTE key is used to exit the programming mode and run the new sequence. This is actually a single key with two separate functions.

HOLD - Pressing HOLD will stop a sequence currently running.

LOCK/DELETE - The LOCK key prohibits control of a remote camera site or access to a monitor so that other operators may not disrupt a particular camera scene or change the monitor display. The DELETE key is used when editing a previously programmed sequence. This is actually a single key with two separate functions.

ACKNOWLEDGE - This key is used to respond to a system event such as the activation of an alarm.

Function Keys

Keyboard function keys put the keyboard in the proper mode to correctly interpret your commands. In most cases whenever these keys are pressed, an indicator in the mode display will show which key has been pressed and therefore which mode the user is in. Additional information is provided in the Keyboard operating section of this manual.

MONITOR - Use the MONITOR key to 'connect' your keyboard to another monitor.

CAMERA - Use the CAMERA key to call up a new camera to your monitor. This is the default mode of the keyboard. The system accepts only valid camera numbers 1 through 9999.

SEQUENCE - Use the SEQUENCE key when 'loading' a sequence onto a monitor. The system is capable of storing up to 60 sequences.

ON / IN - ON selects a receiver/driver auxiliary function at the camera location. The IN key is used to insert a sequence step when programming. This is actually a single key with two separate functions.

OFF / OUT - OFF deselects any receiver/driver auxiliary functions currently in the 'on' state. The OUT key deletes the current sequence step when programming. This is actually a single key with two separate functions.

SET - Press SET to record a preset scene at a remote camera site.

SHOT - Press SHOT to call up a preset scene at a remote camera site.

PROGRAM / END - Use the PROGRAM key to input a camera sequence. The END key is used to exit the programming mode. This is actually a single key with two separate functions.

MEMORY - Use the MEMORY key to record a series of keystrokes into the keyboard local memory. These memories may then be played back to simplify complicated command sequences. There are ten memories having up to 75 keystrokes each.

USER - Press USER to log-on and log-off the system when this feature has been enabled by the system installer, or to select between any of the keyboard 'user' functions. A complete list of the 'user' functions can be found in the USER INFORMATION section of this manual.

ALARM - Press ALARM to arm/disarm cameras and monitors.

*** (star)** - This key is an advanced programming feature and has no default function. It sends a control code to the Allegiant which will cause ERROR 96 to occur unless a custom program function has been predefined at the Factory.

Telemetry Controls

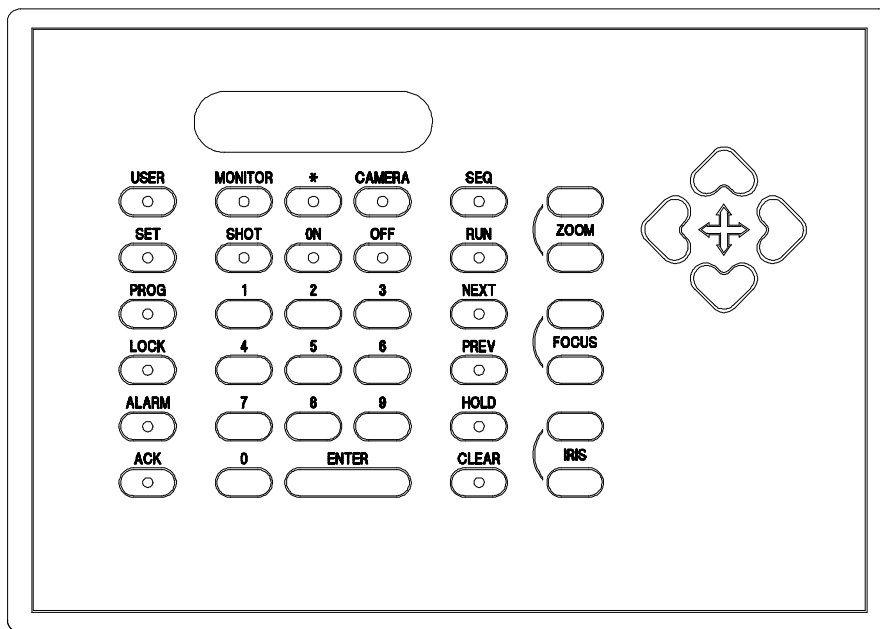
Telemetry controls activate the camera movements. These keys will transmit commands to receiver/drivers at remote camera sites as long as the keys are held down. This gives the operator control over pan/tilt and zoom lens action in addition to any auxiliary functions used. On the TC8550A keyboard, these controls are ergonomically placed so that the operator may operate the lens and the pan/tilt simultaneously. As many as four pan/tilt/zoom/focus commands (Example - Zoom In, Focus Far, Pan Left, and Tilt Down) may be sent to a remote camera site at one time. All three zoom lens functions can also be sent simultaneously (Example - Zoom Out, Focus Near, Iris Open).

Pan/Tilt Control - The pan/tilt control is the joystick located on the right side of the keyboard (or four directional buttons on the TC8551A). Move it in any one of eight directions to make the camera indicated by the number in the camera display tilt up or down, pan left or right, or move diagonally. The joystick of the TC8553 series keyboards are also used to provide zoom control by rotating the knob in either a clockwise or counterclockwise direction.

Lens Control - The lens control buttons are rocker switches located on the left side of the keyboard. Push either the top or the bottom of the switch to make the lens zoom in or out, focus near or far, and open or close the iris (on applicable lenses). Zoom and focus may be operated simultaneously. For the TC8553 series keyboards, the zoom function is controlled by rotating the knob on the joystick.

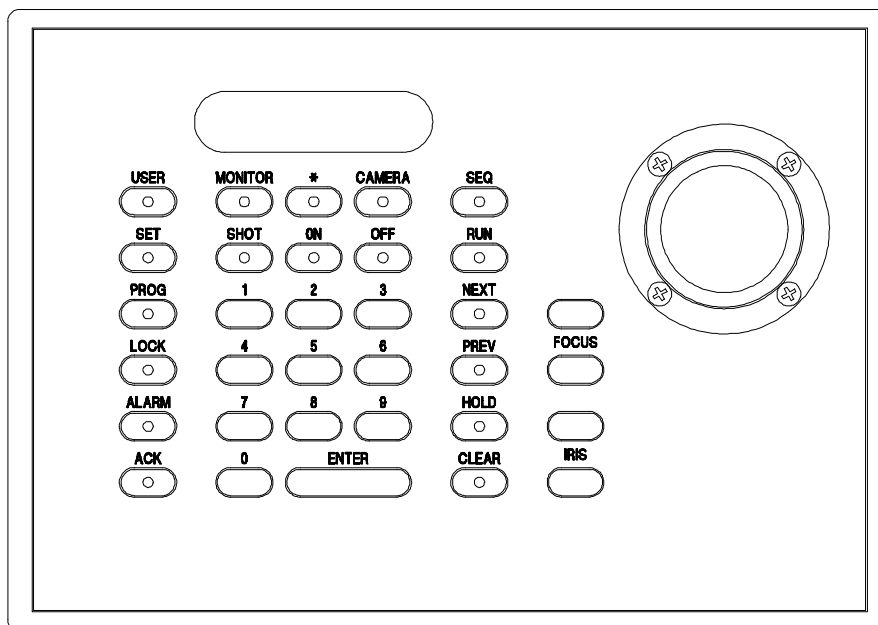
SYSTEM KEYBOARDS - TC8554, TC8555

The various system keyboard displays and functions for the TC8554 and TC8555 are described herein. Refer to the applicable keyboard diagrams as needed.



S9510001AE

TC8554 Keyboard



S9510002AE

TC8555 Keyboard

Keyboard Displays

Monitor Display

The monitor display is a three-digit seven-segment display that serves two purposes. One purpose is to display the number of the monitor that the keyboard is currently controlling. This monitor's camera number appears in the camera display, and the pan and tilt keys control camera movement if applicable. The second purpose is to provide a prompt to a user to log-on to the system if the log-on feature was enabled by the system installer. Once the user has logged on, the display reverts to the monitor number.

Camera Display

The camera display is a four-digit seven-segment display. It shows the number of the camera being viewed on the monitor that the keyboard is controlling. However, there are three modes for this display. The camera mode is the default, but when the user pushes one of the numeric data keys, this display shows the numeric keystrokes as they are entered from the keyboard and also causes the decimal point in the lower right hand side of the camera display to light. If the keyboard remains inactive for about five seconds, the camera display will return to default mode and again display the camera number. The third mode is for error display (reference the Error Messages section of this manual). When the user enters an erroneous key sequence, the keyboard beeps and an error number is temporarily displayed (approx. 2 seconds). If an operator attempts to invoke a restricted function, the camera number will be temporarily replaced with an appropriate system error number. If an attempt is made to access a monitor or remote device which has been locked by a higher priority User, the camera number will be temporarily replaced with an appropriate error number, then the user number of the operator who placed the lock will be briefly displayed.

On-line Indication

If the camera and monitor number are displayed upon power up, the keyboard is communicating with the system. If the USER and OFF indicators are lit, the log-on feature of the system has been enabled by the system installer and the keyboard is waiting for a user to log-on to the system before operation is permitted. If only hyphens (dashes) appear in the monitor display (the USER and OFF indicators are not lit), the keyboard is powered but not communicating with the system.

Mode Displays

The Mode displays are various indicators that light up within certain keys to show the keyboard status. The keyboard will stay in a selected mode until all necessary data have been entered or until the system has timed out. The default mode is camera mode.

Keyboard Controls

The descriptions below indicate the function of the key in its own mode. A key may have other functions when used in complex modes. See the appropriate operation section.

Numeric Keypad

This keypad is used to enter numeric data. When the first numeric key is pressed, the camera display will become a data display, and indicate the numeric keys pressed.

Digits 0 to 9 - The numeric digits are general purpose keys used to enter numeric data. Any digit except a leading zero will appear on the camera display. The keyboard will only recognize four numeric digits at a time. If the data entered is not terminated in a command in about five seconds, the display will clear and again show the camera number.

CLEAR Key - The CLEAR key reinitializes the keyboard. In some cases it can be pushed twice. If there are numeric data in the camera display, the first push clears this data and the second push returns the keyboard to the camera mode. This allows the user to clear incorrect data without leaving the current mode. If there are no data in the camera display, the first push clears the entire keyboard back to the default state.

ENTER Key - The ENTER key terminates commands. It resembles the 'enter' key on a computer keyboard, and indicates the end of numeric data entry. Holding this key when using the ON or OFF functions will cause those functions to repeat until the key is released.

Switcher Control Keys

The switcher control keys control the Allegiant switching and programming functions.

NEXT - This key serves two purposes. First, it sets a sequence of camera switches to run in a forward (ascending) direction. Second, it selects the next step when programming a sequence.

PREVIOUS - The PREVIOUS key has the same action as NEXT, except it sets a sequence to run in the backwards (descending) direction.

RUN - The RUN key starts a sequence if one is currently 'loaded'. The RUN key is also used to exit the programming mode and run the new sequence.

HOLD - Pressing HOLD will stop a sequence currently running.

LOCK - The LOCK key prohibits control of a remote camera site or access to a monitor so that other operators may not disrupt a particular camera scene or change the monitor display. The LOCK key is also used to perform the delete function when editing a previously programmed sequence.

ACKNOWLEDGE - This key is used to respond to a system event such as the activation of an alarm.

Function Keys

Keyboard function keys put the keyboard in the proper mode to correctly interpret your commands. In most cases whenever these keys are pressed, an indicator within the key will show which key has been pressed and therefore which mode the user is in.

MONITOR - Use the MONITOR key to 'connect' your keyboard to another monitor.

CAMERA - Use the CAMERA key to call up a new camera to your monitor. This is the default mode of the keyboard. The system accepts only valid camera numbers 1 through 9999.

SEQUENCE - Use the SEQUENCE key when 'loading' a sequence onto a monitor. The system is capable of storing up to 60 sequences.

ON - ON selects a receiver/driver auxiliary function at the camera location. The ON key is also used to insert a sequence step when programming.

OFF - OFF deselects any receiver/driver auxiliary functions currently in the 'on' state. The OFF key also deletes the current sequence step when programming.

SET - Press SET to record a preset scene at a remote camera site.

SHOT - Press SHOT to call up a preset scene at a remote camera site.

PROGRAM - Use the PROGRAM key to input a camera sequence. The PROGRAM key is also used to exit the programming mode.

USER - Press USER to log-on and log-off the system when this feature has been enabled by the system installer, or to select between any of the keyboard 'user' functions. A complete list of the 'user' functions can be found in the USER INFORMATION section of this manual.

ALARM - Press ALARM to arm/disarm cameras and monitors.

*** (star)** - This key is an advanced programming feature and has no default function. It sends a control code to the Allegiant which will cause ERROR 96 to occur unless a custom program function has been predefined at the Factory.

Telemetry Controls

Telemetry controls activate the camera movements. These keys will transmit commands to receiver/drivers at remote camera sites as long as the keys are held down. This gives the operator control over pan/tilt and zoom lens action in addition to any auxiliary functions used. As many as four pan/tilt/zoom/focus commands (Example - Zoom In, Focus Far, Pan Left, and Tilt Down) may be sent to a remote camera site at one time. All three zoom lens functions can also be sent simultaneously (Example - Zoom Out, Focus Near, Iris Open).

Pan/Tilt Control - The pan/tilt control is the joystick located on the right side of the keyboard (or four directional buttons on the TC8554). Move it in any one of eight directions to make the camera indicated by the number in the camera display tilt up or down, pan left or right, or move diagonally. The joystick of the TC8555 keyboard is also used to provide zoom control by rotating the knob in either a clockwise or counterclockwise direction.

Lens Controls - The lens control buttons are switches located on the right side of the keyboard. Push either the top or the bottom switch to make the lens zoom in or out, focus near or far, and open or close the iris (on applicable lenses). Zoom and focus may be operated simultaneously. For the TC8555 keyboard, the zoom function is controlled by rotating the knob on the joystick.

VIDEO MONITOR DISPLAY

Although the video display is not part of the TC8550 series keyboards, it is part of the user interface and works at times in conjunction with the keyboard. The display contains a text overlay with two rows of 24 characters each. There are a total of 1024 (256 on the TC8500) different characters that can be displayed. Refer to the Character ROM Table section for detailed information on the characters.

NOTE THAT A VIDEO SIGNAL MUST BE PRESENT TO PERMIT GENERATION OF THE MONITOR DISPLAY.

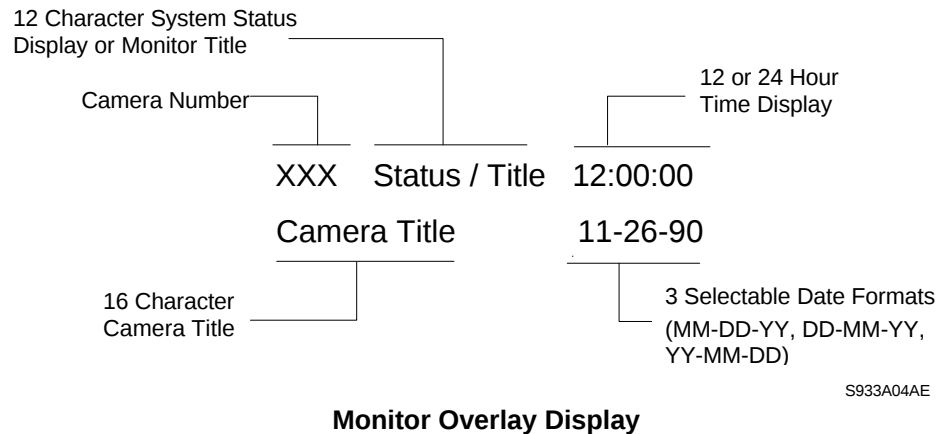
The display is broken down into five areas as shown in the figure below:

Time/Date

The time/date display is generated by the TC8x10 CPU microprocessor module. It is crystal controlled and battery protected for one year minimum without

power. The display is updated once per second and all monitors update simultaneously. The time/date message is always on the right side of the video display with the time on the top line. The time always displays hours, minutes, and seconds, and can be set to either 12 hour or 24 hour operation. The date is available in three user selectable formats, as indicated below:

1. U.S. Format - The order for the American date display is: MM/DD/YY. (Default for TC8x01 systems)
2. International Format - The order for the international date display is: DD/MM/YY (Default for TC8x01X systems)
3. Asian Format - The order for the Asian date display is: YY/MM/DD.



Monitor Title/System Status Display

The monitor title/system status display area is a 12 column display to the right of the camera number. It is unique on each of the monitors. It has different uses, some of which may be selected by the user at a keyboard location. The various uses are described below.

System Status Display

If this display is selected (factory default), it allows the Allegiant system to dynamically inform the user of the system status. The 12 column display is divided into smaller message columns (see figure below), in which special characters inform the user whether the switcher is running or stopped, the switcher's direction, whether a monitor or remote camera is locked, and the alarm status of the camera and monitor.

Format of Monitor Overlay's System Status Display

1	2	3	4	5	6	7	8	9	10	11	12
A	A	A	M	C	E	R	M	A	S	S	S
l	l	l	o	a	r	e	o	b	e	e	e
a	a	a	n	m	r	m	n	s	q	q	q
r	r	r			o			/			
m	m	m	A	A	r	L	L	R	N	N	S
			r	r	/	o	o	e	u	u	t
			m	m	D	c	c	l	m	m	a
					I	k	k				t
					R						

Locations 1, 2, and 3 - Alarm Indication

When the monitor overlay is in the Status Display mode, locations 1 through 3 indicate whether a camera on the monitor is in alarm. If the on-screen camera is currently in alarm, an "ALM" message in a box will flash at this location. A "★★" in a box means that some camera other than the on-screen camera is in alarm. If no cameras are currently in alarm on this monitor, these spaces will be blank. Note that when a monitor has cameras in alarm, pressing NEXT, RUN, or PREVIOUS on the keyboard will move you through the alarm sequencer rather than the regular camera sequencer. The alarm switcher status will be displayed in location 6 using symbols described.

Location 4 - Monitor Arm Status Indication

In the MONITOR ARMED location, the characters "S_M" or "D_M" will appear if the monitor is armed for alarm. "S_M" means that the monitor is a "step" or "sequence" monitor, and will automatically step through multiple alarm videos. "D_M" indicates that the monitor is a "display" or "review" monitor, which will collect alarm videos from one or more step monitors.

When an alarm occurs, the alarmed camera's video will replace the current display of the monitor. If the monitor is not armed, this location will be blank.

Location 5 - Camera Arm Status Indication

In the CAMERA ARMED location characters "C_A" are displayed if the camera being viewed is armed for alarm on that monitor. If the alarm signal associated with this camera becomes active, the camera will be displayed on the appropriate armed monitors.

Location 6 - Error Indication

This location is used to indicate an error on the part of the user. When a user error occurs, this location will display an "ERR" symbol. The specific error number will appear in locations 7 and 8. The error number will also appear in the Camera Number Display field on the keyboard. The display will return

to normal after a few seconds have passed, or if the user presses ENTER on the keyboard.

Location 6 is also used to indicate the sequencing direction when alarms occur. One of four of the following character combinations will be displayed:

1. "Λ_R" indicates the alarms are sequencing in a forward direction.
2. "R_V" indicates the alarms are sequencing in a reverse direction.
3. "Λ_S" indicates the sequencing of alarms has stopped, but if started again would sequence in a forward direction.
4. "S_V" indicates the sequencing of alarms has stopped, but if started again would sequence in a reverse direction.

Location 6 can also be used to display a symbol to indicate pan/tilt/zoom equipped cameras. Using the optional TC8850 Graphical User Interface software, controllable cameras can be individually configured to display a "◁▷" symbol in location 6 whenever they are viewed on a system monitor.

Location 7 - Remote Lock Indication

This location will display characters "R_L" to indicate that control over the movements of the camera being viewed have been 'locked' by a user. Control over this camera is now possible only by the user who locked the camera or by a user with higher priority. If the camera is not locked, the icon will not be displayed. If a user error has occurred, this location will temporarily hold part of the error number.

Location 8 - Monitor Lock Indication

This location will display characters "M_L" to indicate that the monitor has been 'locked' by a user. The camera currently being viewed can not be changed except by the user who locked the monitor or one with higher priority. If the monitor is not locked, the icon will not be displayed. If a user error has occurred, this location will temporarily hold part of the error number.

Location 9 - Sequence Type Indication

This location is used to display the type of sequence currently 'loaded' on the monitor. An 'absolute sequence' is indicated by the characters "^A_S" which means that monitors programmed in the sequence program refer to the exact monitor(s) from which the sequence may be run. Sequences created using the system keyboards are always of this type, so absolute sequences are the only type possible in a base system. Sequences which are 'relative sequences' are designated by the characters "^R_S" in this location. These sequences will run on any monitor or group of monitors and can only be programmed using the optional TC8850 Graphical User Interface software package, or the optional TC8x59 Master Control Software package with a personal computer.

Locations 10 and 11 - Sequence Number

The sequence number currently 'active' for the monitor is displayed in these two locations. This is a number between 1 and 60, or 00 to indicate that no sequence is loaded.

Location 12 - Sequence Status Indication

This location indicates the status of the sequence 'active' in the monitor. There are four possible character combinations:

1. "^A_R" indicates the current sequence is sequencing in a forward direction.
2. "^R_V" indicates the current sequence is sequencing in a reverse direction.
3. "^A_S" indicates the sequence is stopped, but if started again would sequence in a forward direction.
4. "^S_V" indicates the sequence is stopped, but if started again would sequence in a reverse direction.

Monitor Message

The monitor message is a stationary 12 character title which may be placed on a monitor instead of the System Status display. A specific monitor message can be programmed from either the keyboard (see User Function 17), the TC8850 Graphical User Interface software package, or the optional TC8x59 Master Control Software package.

Broadcast Message

A message can be sent by the operator of the personal computer using the optional TC8850 Graphical User Interface software package, or the TC8x59 Master Control Software package to all the monitors in the system. This message may be up to 24 characters long (12 on a TC8500), and can be used to notify all users at all monitor locations of important information. The message, along with its beginning and ending time and date, is also printed out on the logging printer, if one is connected; and any acknowledgment from users is also recorded. The broadcast duration may be set for 1 to 60 seconds. On a TC8500 system this message temporarily overwrites the 12-character monitor title/system status display. On other systems, it is displayed on a line by itself.

Program Prompts

During entry of sequence programming using the keyboard, the Allegiant system prompts the user on the monitor his keyboard is currently 'controlling'. The display will return to its previous form when the user leaves the programming mode.

Camera Number

The left most display on the top line shows the camera number. This number is generated by the system and is always displayed. This number identifies this camera when using the keyboard for video call-ups. Each number is unique. In base systems, this number is the same as the numbered BNC connector that the camera is plugged into on the rear of the bay (physical camera number). However, the optional TC8850 Graphical User Interface software package, or the optional TC8x59 Master Control Software package can be used to change this number to any unique number between 1 and 9999 (TC8500 Series systems are limited to 999).

Camera Title

The camera identification display is the first 16 characters of the lower line. These 16 characters are used to label each camera. Each camera has its own title, which will be displayed whenever that camera is called up for viewing. The characters can be entered from the keyboard using a user function operation or may be entered from the personal computer keyboard using the optional Master Control Software package. There are 1024 (256 on a TC8500) possible characters to choose from and special character sets are available, although a special order is required.

FACTORY DEFAULT SETTINGS

As the Allegiant system is shipped from the factory, certain features are placed in a default configuration. Some of these features can be selected by the installer at the time of system installation/configuration. Generally the default configuration represents the simplest mode of operation, allowing the user to become familiar with the system before any advanced features are selected. These default settings are described below for reference.

User Selectable DIP Switch Settings For Main CPU Bay

NOTE: AFTER CHANGING ANY OF THE FOLLOWING SWITCHES, THE SYSTEM MUST EITHER BE POWERED OFF AND ON BY THE MAIN POWER SWITCH OR RESET USING THE KEYBOARD USER FUNCTION 15 (REFER TO LATER SECTION).

System CPU modules contain two 8 position DIP switches (S1001 & S1002 on TC8511C CPUs; S100 & S101 on all other CPUs). The functions assigned to the upper DIP switch (S1001 or S100) are reserved for certain accessory products and all settings should be left in the OFF position. The options assigned to the lower 8 position DIP switch are as follows:

DIP Switch Number	Factory Default Setting	S1002 or S101 DIP Switch Function
1	OFF	Reserved
2	OFF	Alarm Port Mode
3	OFF	Old Keyboard Modes
4	OFF	Printer Port Mode
5	OFF	Keyboard Security Feature
6	OFF	Console Security Feature
7	ON	Keyboard Protocol Mode
8	OFF	Communication Parameters and Boot Screen Execution

Switch 1

This switch is not used in the TC8500, TC8600, and TC8800 systems and should be left off.

Switch 2

If switch 2 is turned on, the Alarm port on the rear of the main Allegiant bay is configured as an auxiliary Console port. This allows the Alarm port (in addition to the regular Console port) to communicate with the optional TC8850 Graphical User Interface software package, or the optional TC8x59 Master Control Software running on a PC. The port can also be used to control the Allegiant system via the Console Command Language (documented in the optional

CCL manual). The normal Console port and the Alarm port (when switch 2 is on) may be used to control the Allegiant system simultaneously. Communications parameters (baud & handshake) for the Alarm port can be set using Keyboard User Function 32 (covered later in this manual), with the optional TC8850 Graphical User Interface software package, or with the optional TC8x59 Master Control Software.

Note that the pin-out of the Alarm port differs from that of the Console port, so the cable supplied with the optional TC8850 Graphical User Interface software package, or the optional TC8x59 Master Control Software package can not be used when interfacing with the Alarm port. If necessary, refer to the Appendix section of this manual for the Alarm port pinouts.

Switch 3

Note that this switch setting is ignored if DIP switch 7 (described below) is set to ON. With a TC8500 or TC8600 system, the CPU will communicate with the system keyboards using a "four poll byte" protocol when this switch is off; when it is on, the keyboard communication will use an "eight poll byte" protocol. For TC8800 systems, the settings are reversed: eight poll bytes when off, four poll bytes when on. An older keyboard with part number TC8550KB must use the four poll byte protocol; a keyboard with part number TC8550KB-8 must use the eight poll byte protocol. A newer keyboard marked TC8550, TC8550A, TC8551A, TC8553, TC8554, or TC8555 can automatically communicate using either protocol. The system CPU module must be configured to use a protocol compatible with the keyboards being used. The TC8500 and TC8600 should normally use the four poll byte protocol; the TC8800 should normally use the eight poll byte protocol. If a TC8600 is being used as a main site to control satellite sites, it should be set to use the eight byte protocol.

Switch 4

If switch 4 is on, the Printer port on the rear of the main Allegiant bay is configured as an auxiliary Console port. See the description of switch 2, above, for information on using an auxiliary Console port. The Printer port has the same pin-out as the normal Console port, so the Console cable supplied with the optional TC8850 Graphical User Interface software package, or the optional TC8x59 Master Control Software package may be used to interface with the Printer port when switch 4 is on. Communication parameters (baud & handshake) for the Printer port can be set using Keyboard User Function 31 (covered later in this manual), with the optional

TC8850 Graphical User Interface software package, or with the optional TC8x59 Master Control Software.

Switch 5

Switch 5 controls the system security modes. When this switch is set to ON, the system log-in features can be controlled using keyboard User Function 27 and User Function 28 (refer to section on Keyboard User Functions for complete information). Users with priority 1 can access User Function 27 to select if the system keyboard log-in feature will be enabled or disabled. When enabled, the system keyboards require each user to 'log-on' and 'log-off' the system. All users will be required to enter a user number and the correct password before interaction with the system is permitted.

Users with priority 1 can also access User Function 28 to select if the Console port log-in feature will be enabled or disabled. When enabled, any external PC or other computing device will be required to 'log-on' and 'log-off' the system. Any external PC or other computing device will be required to enter a user number and the correct password before interaction with the system is permitted.

If this switch is turned OFF or if the features are disabled using User Functions 27 and 28, the system keyboards and the Console port are always 'on-line' with the system.

Note: When changing from the no 'log-on' to the 'log-on' mode, all system keyboards will initially be 'logged-off'.

Switch 6

This switch is currently not used and should be left off.

Switch 7

When switch 7 is ON (factory default), the Allegiant CPU will communicate with system keyboards using a '6 poll byte' protocol. This format is used to provide variable speed pan/tilt control capability for AutoDome equipped camera sites and is only compatible with TC8550A, TC8551A, TC8553, TC8554, and TC8555 type keyboards. When this switch setting is ON, DIP switch 3 (explained above) is ignored. Note that the variable speed mode is **not** compatible with the older TC8561 receiver/drivers without the use of a TC8785 Code Converter unit.

Switch 8

Switch 8 controls the protocol settings of the Console, Printer and Alarm external RS-232 ports.

If the switch is turned OFF, the system will always use the factory default settings for the RS-232 data communication protocols as listed below.

With switch 8 ON, any RS-232 port protocols changed using Keyboard User Function 30 (covered later in this manual), the optional TC8850 Graphical User Interface software, or the optional TC8x59 Master Control Software package are active.

Users with priority level 1 can also use keyboard User Function 29 to reset any changed protocols back to the default settings (see below).

Switch 8 also controls the activation of a 'boot screen' program previously downloaded into the CPU's memory. The 'boot screen' is a custom program provided by the Factory to provide special system functions or features. If the switch setting is OFF, any existing boot screen will not be active.

The default (DIP switch 8 OFF or after activation of Keyboard User Function 29) data communication settings for the Allegiant system are listed below.

Settings	Console Port	Printer Port	Alarm Port	Keyboard Ports
Baud (after CPU software revision 7.1; March 1997)	19,200	19,200	19,200	9600
Baud (settings prior to CPU software revision 7.1)	1200	1200	1200	9600
Stop Bits	1	1	1	--
Data Bits	8	8	8	--
Parity	None	None	None	--
Handshake	Yes	No	No	--

User Selectable DIP Switch

Settings for TC8816A Data Receiver

Modules used in TC8802 Monitor

Expansion Bays

NOTE: AFTER CHANGING ANY OF THE FOLLOWING SWITCHES, THE SYSTEM MUST BE POWERED OFF AND ON BY THE TC8802 MAIN POWER SWITCH.

TC8816A Data Receiver modules contain two 8 position DIP switches (S100 & S101). The functions assigned to the upper DIP switch (S100) are reserved and all settings should be left in the OFF position. The options assigned to the 8 position DIP switch S101 are as follows:

DIP Switch Number	Factory Default Setting	S101 DIP Switch Function
1	OFF	Reserved
2	OFF	Keyboard Group
3	ON	Keyboard Group
4	OFF	Reserved
5	OFF	Reserved
6	OFF	New Keyboard Mode
7	ON	Operational Mode
8	OFF	Operational Mode

Switch 1

This switch is reserved and should always be left off.

Switch 2 and Switch 3

Up to 8 system keyboards can be connected to the rear panel of the TC8802 Monitor Expansion Bay. DIP switches 2 and 3 determine the system keyboard group that can be assigned to the TC8802 bay. Follow the table below to select the desired group.

Switch 2	Switch 3	Keyboard Group
Off	Off	Reserved
Off	On	Keyboards 9-16
(Default)		
On	Off	Keyboards 17-24
On	On	Keyboards 25-32

Switch 4 and Switch 5

These switches are reserved and should always be left off.

Switch 6

When switch 6 is ON, the TC8816A Data Receiver module will communicate with system keyboards using a '6 poll byte' protocol. This format is used to provide variable speed pan/tilt control capability for AutoDome equipped camera sites and is only compatible with TC8550A, TC8551A, TC8553, TC8554, and TC8555 type keyboards. The default setting is OFF.

Switch 7

This switch determines the operational mode of the TC8816A and must always be left on.

Switch 8

This switch determines the operational mode of the TC8816A and must always be left off.

USER INFORMATION

There are eight levels of user priority in the Allegiant system. Each of the 32 users in the Allegiant system has a default priority level assignment. These user levels determine access to various system functions and provide a means to prioritize user control of monitors and pan/tilt/zoom equipped camera sites. Generally, users with higher priority (highest = 1) can regain control over monitors or pan/tilt/zoom cameras 'locked' by another user.

User Number	Default Password	Priority Level	Default Keyboard
1	1	1	1
2	2	2	2
3	3	2	3
4	4	2	4
5	5	8	5
6	6	8	6
7	7	8	7
8	8	2	8
9	9	2	9
10	10	2	10
11	11	2	11
12	12	2	12
13	13	2	13
14	14	2	14
15	15	2	15
16	16	2	16
17	17	2	17
18	18	2	18
19	19	2	19
20	20	2	20
21	21	8	21
22	22	8	22
23	23	8	23
24	24	8	24
25	25	8	25
26	26	8	26
27	27	8	27
28	28	8	28
29	29	8	29
30	30	8	30
31	31	8	31
32	32	8	32

The 8 priority level user assignments can be changed using the optional TC8850 Graphical User Interface software, or the optional TC8x59 Master Control Software package, but for a base system the table above shows the default values that have been set. Note that in base systems where the log-in feature has not been selected, user number is automatically assigned to a specific keyboard port. This essentially sets the keyboard as the priority determinant. Also shown in the table are the default user passwords assigned to each user as the system

is shipped from the Factory. Once a user is logged-on to the system, the password can be changed using keyboard User Function number 10. Refer to the specific section of the operation instructions for exact procedures of using keyboard User Functions. Although the table indicates 32 keyboards, note that only 8 keyboards are permitted in TC8500 systems, 16 in TC8600 systems, and 32 in TC8800 systems.

User Priority Access Table

The following table shows system function access as it applies to the 8 levels of users.

System Function	Priority Level		
	1	2 to 7	8
Switch Video On Monitors	Yes	Yes	Yes
Control Pan/Tilt/Zoom Camera	Yes	Yes	Yes
Lock Monitor	Yes	Yes	Yes
Lock Pan/Tilt/Zoom Camera	Yes	Yes	Yes
Acknowledge Alarms	Yes	Yes	Yes
Perform Keyboard Test	Yes	Yes	Yes
Show Keyboard Number	Yes	Yes	Yes
Activate Keyboard Beeper	Yes	Yes	Yes
Change User Password	Yes	Yes	Yes
Program Sequences	Yes	Yes	No
Position Video Overlay Display	Yes	Yes	No
Set Overlay Display Brightness	Yes	Yes	No
Select Overlay Display Type	Yes	Yes	No
Set System Time/Date	Yes	Yes	No
Program Pre-positions	Yes	Yes	No
Set Time/Date Format	Yes	No	No
Set Camera and Monitor Titles	Yes	No	No
Enable Time Events	Yes	No	No
Reset System	Yes	No	No
Printout Tables and Sequences	Yes	No	No
Default Monitor Overlay	Yes	No	No
Select Alarm Response Mode	Yes	No	No
Select Printer Mode	Yes	No	No
Designate Alarm Monitor Type	Yes	No	No
Select Keyboard Log-In	Yes	No	No
Select Console Log-In	Yes	No	No
Configure/Reset RS-232 Ports	Yes	No	No

ALARM INFORMATION

The ability to automatically switch video in response to an external signal (usually a contact closure) is a necessary feature in any video switching system. The Allegiant system permits users with priority level 1 to select any 1 of 3 predefined alarm response modes (via keyboard User Function 19). A description of these three modes appears below. Pictorial examples of the three alarm responses are also shown on the following pages.

The system can also be programmed with a wide variety of alarm response characteristics using the flexible VersAlarm™ system. Refer to the TC8850 Graphical User Interface software, or the optional TC8x59 Master Control Software manual for details.

Basic Alarm Response Mode

In BASIC alarm response mode, any or all of the monitors can be selected as alarm display monitors. Each alarm can then be armed to display its camera(s) on any set of armed monitors. Multiple alarms, on the same monitor, will sequence at a 1 second rate (2 seconds on the TC8500). Note that monitors and alarms can be armed and disarmed individually as required. Alarmed video will automatically clear when the alarm input signal is reset.

Auto-Build Alarm Response Mode

This mode uses a set of monitors as alarm display monitors. All system monitors may be armed if desired. Each triggered alarm will display its alarm video on a different monitor, starting with the lowest numbered armed monitor. If all the armed monitors are already displaying alarm video, subsequent alarms will build on the existing alarmed monitors; and each monitor will sequence through its alarm videos at a 1 second rate (2 seconds on a TC8500). Note that monitors and alarms can be armed and disarmed individually as required. Alarmed video will automatically clear when the alarm input signal is reset.

Sequence & Display Alarm Response Mode

This mode designates two monitors as alarm response monitors. Monitor #1 will be the DISPLAY monitor (also called a "REVIEW" monitor) and monitor #2 will be the SEQUENCE (or STEP) monitor. The first alarm will appear on both monitors and additional alarms will begin to sequence at a 1 second rate (2 seconds on the TC8500) on the SEQUENCE monitor. The DISPLAY monitor will hold the first alarmed camera video until manually acknowledged through the keyboard. When the first video is cleared from the DISPLAY monitor, the next alarmed video ('next' being the camera which became alarmed second) will be displayed until cleared; operation continues in this manner. Note that alarms can be armed and disarmed individually as required. Note also that all alarms must be manually cleared; the presence of alarm video is not dependent upon the duration of the alarm input signal to the system.

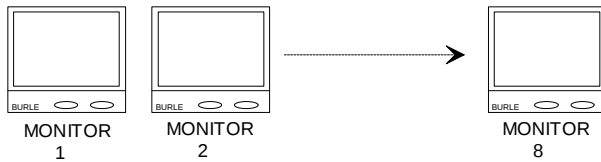
Alarm Activated Pre-Position

Alarm activated pre-position capability also exists in each of the three alarm response modes. This enables a pan/tilt/zoom equipped camera to automatically position itself to a preprogrammed scene as a result of an alarm signal. Note that the pan/tilt and zoom on the camera must have the necessary options for pre-position control. The system default is to activate pre-position #16 of the system camera receiving an alarm. Using the optional TC8850 Graphical User Interface software, or the optional TC8x59 Master Control Software package, the response to alarms can be configured as required by the user.

Sample Alarm Responses

Basic Mode

In the Basic alarm response mode, cameras are individually armed for each alarm monitor.



Alarm Status

1st Alarm

2nd Alarm

3rd Alarm

Alarm Station Display

Video associated with 1st alarm is displayed on any or all appropriately armed monitors.

Video associated with 2nd alarm is displayed on any or all appropriately armed monitors.

Video associated with 3rd alarm is displayed on any or all appropriately armed monitors.

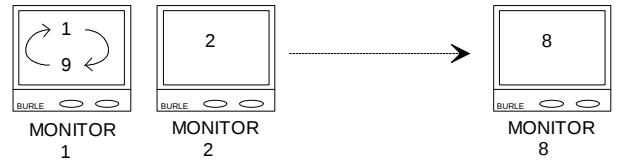
Monitors and their respectively armed cameras are programmed individually.

Multiple alarms on monitors are sequenced automatically.

Alarmed video remains on monitors for duration of alarm input signal.

Auto-Build Mode

In the Auto-Build alarm response mode, alarms “build-up” on armed monitors as new alarms are received.



Alarm Status

1st Alarm

2nd Alarm

3rd Alarm

(Continue sequence)

8th Alarm

9th Alarm

Alarm Station Display

Video associated with 1st alarm is displayed on monitor # 1 (if armed).

Video associated with 2nd alarm is displayed on monitor # 2 (if armed).

Video associated with 3rd alarm is displayed on monitor # 3 (if armed).

Video associated with 8th alarm is displayed on monitor # 8 (if armed).

Video associated with 9th alarm is sequenced with video of 1st alarm on monitor # 1.

Any number of monitors may be armed.

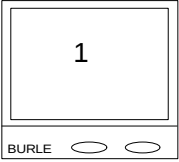
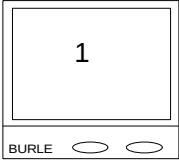
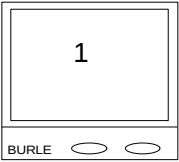
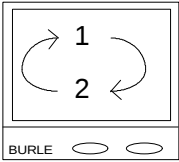
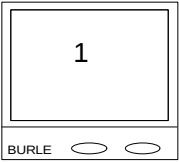
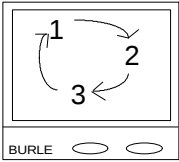
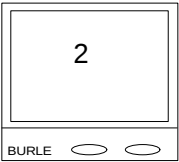
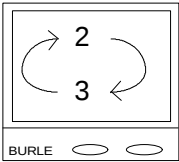
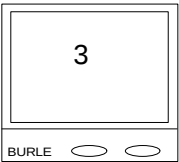
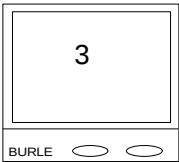
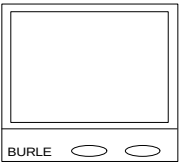
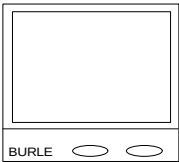
Multiple alarms on monitors are sequenced automatically.

Alarm video remains on monitors for duration of alarm input signal.

Sample Alarm Responses (Continued)

Sequence & Display Mode

In the Sequence & Display mode alarm response mode, a monitor pair is used to display alarmed video.

	<u>Display Monitor</u>	<u>Sequence Monitor</u>	<u>Monitor Actions</u>	<u>Keyboard Operator Action</u>
1st Alarm Occurs			D= Video associated with 1st alarm is displayed. S= Video associated with 1st alarm is displayed.	NONE
2nd Alarm Occurs			D= Video associated with 1st alarm is still displayed. S= Video associated with 1st and 2nd alarms are sequenced.	NONE
3rd Alarm Occurs			D= Video associated with 1st alarm is still displayed. S= Video associated with 1st, 2nd, and 3rd alarms are sequenced.	NONE
			D= 1st alarm video is removed. 2nd alarm video is now displayed. S= Video associated with 2nd and 3rd alarms will continue to sequence.	1st ALARM IS ACKNOWLEDGED
			D= 2nd alarm video is removed. 3rd alarm video is now displayed. S= Only video associated with 2nd alarm remains.	2nd ALARM IS ACKNOWLEDGED
			Since all alarms have been acknowledged, both monitors return to normal operator control.	3rd ALARM IS ACKNOWLEDGED

KEYBOARD OPERATING INSTRUCTIONS

General

As the system is supplied from the factory, various user selectable features have been placed in a default state. A description of these features is given in the section on FACTORY DEFAULT SETTINGS. Since these features are user selectable and have a great effect on the personality of the system, several modes of operation are possible. The step-by-step instructions will cover operation of the system using the factory default settings first, then details will be provided on operational changes as a result of certain feature selections. Keystroke examples are provided for each keyboard operation.

System Commands

Keyboard Log-In Procedure

Two modes of keyboard access exist. Using factory default settings, the keyboard is ready to be used as soon as power is applied to the TC8x01 main CPU bay. The second mode requires system Users to 'Log-on' to the keyboard before access to the system is permitted.

If the log-on feature is enabled, perform the following steps to log-on to the keyboard:

1. Verify that the USER and OFF indicators on the keyboard are lit. The LINE indicator must also be lit to show that the keyboard is connected to the main CPU bay.
2. Press ON. The ON indicator should light and the keyboard monitor display should show a 'U' as a prompt for entering a User number.
3. Key in your User number using the numeric keypad, then press ENTER. Up to 32 different user numbers (1 to 32) are available. Refer to the section on FACTORY DEFAULT SETTINGS for priority levels assigned to each user number.
4. If an entry is entered in error, press CLEAR and repeat the above step.
5. Press ENTER.
6. Verify that the keyboard monitor display now shows a 'P'.
7. Key in the password for a maximum of six digits. The keyboard camera display will indicate how many digits have been entered. Press ENTER when finished entering the user password.
8. If the password is entered in error, return to step 1.
9. You should now be logged-on to the system. Verify that the ON LINE indicator is lit. The keyboard monitor and camera displays will now indicate which monitor and camera are currently 'connected' to the keyboard.

EXAMPLE: ON 12 ENTER 123456 ENTER

This example shows user #12 with password #123456 logging-on to the system.

Keyboard Log-Off Procedure

If the log-on and log-off feature has not been enabled, no action is necessary. If the feature has been selected and you are currently logged-on, perform the following steps to log-off the system:

1. Press the USER key, then press the OFF key. The OFF indicator will light and 'dashes' will appear in the keyboard monitor and camera displays.

EXAMPLE: USER OFF

The above example will log-off the current user from the system.

Programming Local Command Memory

TC8550A and TC8553 series system keyboards allow users to create up to ten custom commands to replace a series of manual keystrokes. Perform the following steps to store a series of manual keystrokes for later recall:

1. Press MEMORY key and verify the indicator lights.
2. Select and enter a command number (1 to 10) using the numeric keypad.
3. Press ENTER and verify the keyboard camera display changes to an 'L' representing local memory mode. The selected command number will also be displayed to the right of the 'L'.
4. Key in steps to be stored into this command sequence. Any keys but PROGRAM, MEMORY, and CLEAR may be used in the sequence. In addition, camera control keys such as Pan/Tilt and zoom controls are not permitted. Up to 75 steps are permitted with applicable keyboards. The keyboard monitor display will indicate the number of steps entered. The keystrokes should be entered exactly as if you were entering the actual sequence manually. Sometimes it is best to make a 'dry run' in the manual mode before attempting to program a local command memory to insure no keystrokes are omitted. Should you wish to erase a partially entered command

sequence while in the program mode, press CLEAR. This exits the program mode without updating the keystroke memory.

5. Press MEMORY to end programming the local memory mode. This saves the keystroke program in the keyboard's local memory.

EXAMPLE: MEMORY 1 ENTER MONITOR 2 ENTER CAMERA 5 ENTER MEMORY

This example programs local memory #1 to switch camera #5 to monitor #2.

6. To delete a local command memory previously stored, press MEMORY, the command number (1 to 8), ENTER, then MEMORY.

Executing Local Command Memory

To execute previously stored TC8550A and TC8553 local memory commands, perform the following steps:

1. Press MEMORY and verify that the indicator lights.
2. Key in the appropriate command number (1 to 10).
3. Press RUN.

EXAMPLE: MEMORY 1 RUN

This example executes whatever keys have been programmed into the local memory #1. The effect is the same as if they were manually entered by the user.

Switcher Commands

Camera Selection

Use the following steps to select cameras for viewing:

1. Press Camera key. **Note that the keyboard's default mode is the CAMERA mode so the CAMERA button usually does not need to be pushed.**
2. Key in any valid camera number using the numeric keypad and press ENTER. The selected camera will then appear on the monitor currently 'controlled' by the keyboard.

EXAMPLE: CAMERA 33 ENTER or 33 ENTER

This example will call up camera #33 on the keyboard's current monitor.

Monitor Selection

Use the following steps to select which monitor will respond to the user's keyboard commands:

1. Press MONITOR key.
2. Key in any valid monitor number using the numeric keypad and press ENTER. The number of the selected monitor will appear on the keyboard's monitor display.

EXAMPLE: MONITOR 5 ENTER

This example will select monitor 5 for the operator.

SEQUENCE INFORMATION

General

Sequences are lists of video switching instructions to be executed by the system. A maximum of 60 sequences containing a total of up to 3000 steps can be stored in the Allegiant system for rapid execution. A sequence can comprise any number of system cameras, in any order, and even include multiple monitor numbers. A Salvo sequence can be entered which will switch any number of desired cameras as a synchronized group to a bank of monitors.

In the sequence programming mode (discussed in the next section), some of the keyboard controls are used for programming. Note that the keyboard button designations of END, DELETE, IN, OUT, and EXECUTE are **not** applicable to TC8554 and

TC8555 keyboards. The various keys and their functions are noted as follows:

1. The joystick UP and DOWN functions are used to move the cell cursor up and down the program spreadsheet steps. The joystick LEFT and RIGHT functions move the cell cursor left and right. When at the top, bottom, right or left edge, the cursor does not wrap around. Note that the joystick cannot be used to 'add' a new step.
2. The PREVIOUS and NEXT keys are used to move up and down steps just like the joystick with the following additional features:

If you push NEXT at the bottom of the sequence program, a new step will be created at the end of the sequence. Also, NEXT (and PREVIOUS) will

always put the cursor on the camera number program field.

3. Use the numeric data keypad to enter numeric data. Entries are terminated with the ENTER button and may be cleared with CLEAR and reentered before pushing ENTER. All cell entries must be confirmed by pushing ENTER or by moving the cursor with the joystick or the PREVIOUS or NEXT button. If one of these actions is not taken, the cell's contents may be lost.
4. As mentioned above, the program spreadsheet may be extended by going to the last cell and pressing NEXT. In addition, it is possible to add a step in the middle of the program by pressing IN, which opens up a new cell at the current step location. Use OUT to delete the current step from the spreadsheet.
5. The LOCK/DELETE key will erase all program steps beyond the current one. You may also completely remove a sequence from memory when you are on step 1 by pressing LOCK/DELETE, then OFF/OUT. In addition to deleting the sequence, the system will automatically go back to the entrance to the program mode. You may now enter a sequence number and begin again or you may press CLEAR to exit the program mode altogether.
6. You may finish programming by pushing the PROGRAM/END or RUN/EXECUTE keys. Using RUN/EXECUTE will automatically load the sequence program and begin running it.

Format of Sample Sequence

The simplest way to think of the program information is in terms of a spreadsheet type table, which consists of four columns of information.

The table shown below is an example of a typical sequence.

Step	Cam No.	Mon No.	Dwell
1	10	4	5
2	8	4	5
3	6	4	5
4	20	4	3
5	1	4	HOLD

The length of any one sequence spreadsheet may vary from a few steps to several hundred if desired, as long as the total length of the 60 combined spreadsheets does not exceed 3000 steps. Each spreadsheet must be assigned a sequence number. When a sequence is called for use or for editing, the

user is essentially calling up a spreadsheet. Other advanced features allow control over receiver/driver functions in sequence steps when using the optional Master Control Software program.

Sample Sequence Description

Once the sequence program mode has been entered, certain fields of the monitor overlay display will change to a format typical to the sections shown in bold below:

023 **S0001 L0005** 12:01:01
>**C0010**<**M004 D05** 10-20-94

The following is an explanation of the various cells of the program spreadsheet table:

1. Step Number

023 **S0001** L0005 12:01:01
>C0010<M004 D05 10-20-94

The step number is a non-alterable field. It is only a reference point for the location in the program spreadsheet. When in the program mode this number is displayed on the monitor message line in the form of "Snnnn" where nnnn equals the number of the step currently being displayed or edited.

2. Length

023 S0001 **L0005** 12:01:01
>C0010<M004 D05 10-20-94

The length number is a non-alterable field. It is used only for indicating the total number of steps of the program spreadsheet. When in the program mode, this number is displayed on the monitor message line in the form of "Lnnnn" where nnnn equals the number of steps.

3. Camera Number

023 S0001 L0005 12:01:01
>**C0010**<M004 D05 12-25-88

The camera number is the number of the camera that the programmer wants to have displayed. The camera numbers can be in any order; the Allegiant system can work with a totally random sequence. This number may be any valid camera number. Note the cell prompts (">" "<") before and after the camera number.

4. Monitor Number

023 S0001 L0005 12:01:01
C0010>**M004**< D05 2-25-88

The monitor number is the monitor on which the above-mentioned camera is to be displayed. A single sequence may switch one monitor or it may switch multiple monitors. . Note the cell prompts (">" "<") before and after the monitor number.

5. Dwell Time

023 S0001 L0005 12:01:01
C0010 M004>D05<12-25-88

The dwell entry is the time, expressed in seconds, that the selected camera is to appear on the display monitor. For example, using the above sample program, in step 1, camera 10 will appear on monitor 4 for five seconds. The dwell time may be from one to 60 seconds. If more than a sixty second dwell time is required, simply enter the same camera and monitor combination in the following step along with an additional dwell time. In addition to the numeric entry, the user may choose three other options as a sequence dwell entry - HOLD, UNLOAD, and SALVO. SALVO will be explained later in the section on the SalvoSwitching® feature. Note the cell prompts (">" "<") before and after the dwell number.

The HOLD option allows the programmer to run a sequence to a certain point and stop. This point can be considered like a "home" location which will be displayed unless the user takes a "tour" with the run command. The sequencer will then run until the next hold is encountered. To enter a HOLD dwell, key in '62' as the dwell time. In the example, cameras #10, 8, and 6 will sequence on monitor #4, with each being displayed for 5 seconds. Cam #20 will be displayed for 3 seconds before switching to cam #1. Since step 5 contains a HOLD command in the dwell column, Monitor #4 will display camera 1 until the operator continues the sequence by depressing the RUN key on the keyboard.

The UNLOAD option allows the programmer to run a sequence to a certain point, then automatically unload the sequence from its monitor. The sequence still remains stored in the system memory. To enter an UNLOAD command, key in '63' as the dwell time.

Sequence Programming Instructions

Note that a sequence may be any length as long as the combined total of all sequences does not exceed 3000 steps.

In the program mode, the monitor display shows the step number and sequence length, and cell prompts appear in the camera identification display area.

1. Press PROGRAM and verify the indicator lights.
2. Key in the sequence number (1 through 60) using the numeric keypad and press ENTER. The video monitor display should change to a default appearance as shown below:

023 S0001 L0001 12:01:01
>C0001<M001 D02 12-25-88

3. Key in the number of the first camera to appear in the sequence using the numeric keypad.

4. If the entry is correct, press ENTER or use the joystick to move right. At this point, if the camera is available to the user (i.e., the camera has not been restricted in the lockout table), the system will enter the camera into the sequence.

5. Verify the camera is correct. If the joystick was moved right to 'enter' the camera, the display will then appear as:

023 S0001 L0001 12:01:01
C0001>M001<D02 12-25-88

6. In this field, key in the number of the monitor on which the camera should appear.

7. If the entry is correct, move the joystick right. The video display should then look like this:

023 S0001 L0001 12:01:01
C0001 M001>D02< 12-25-88.

Key into the numeric keypad the duration in seconds (1 to 60) that the above camera is to be displayed on the selected monitor. In addition to seconds, the user may enter 61 for 'salvo' mode, 62 for 'hold', or 63 for 'unload'. The 'salvo' mode means go to the next step immediately (no dwell), and 'hold' means stop the sequence on this step. 'Unload' removes the sequence from the active monitor workspace. If using the 'salvo' mode, be sure to enter a dwell in seconds as the last step of the 'salvo' switch. A 'salvo' entry would change the display to look like this:

023 S0001 L0001 12:01:01
C0001 M001>SLV< 12-25-88

A 'hold' entry would look like this:

023 S0001 L0001 12:01:01
C0001 M001>HLD< 12-25-88

An 'unload' entry would look like this:

023 S001 L001 12:01:01
C0001 M001>ULD<12-25-88

9. If the entry is correct, **press NEXT to proceed to the next step**. One full step line has now been entered and the next step may be keyed in just as the first. Note as in the first screen below that the length and step numbers have been incremented, the camera number is incremented (if allowed by the lockout tables), and the monitor number and dwell have been copied from the previous line.

023 S0002 L0002 12:01:01
>C0002<M001 002 12-25-88

If a previously entered sequence were being edited, the length cell would indicate the total number of lines in the sequence. Also, the joystick may be used to move within an existing sequence to simplify editing.

REMEMBER THAT THE JOYSTICK CANNOT BE USED TO 'ADD' A NEW STEP. A NEW

STEP CAN ONLY BE ADDED BY PRESSING NEXT OR THE ON/IN KEY.

- Repeat above steps 3 to 9 to program subsequent steps. When the sequence is completed, press PROGRAM/END or RUN/EXECUTE to terminate the program mode. Note that pressing RUN/EXECUTE will store the sequence, load it on the monitor being controlled by the keyboard, then immediately start it running. Pressing PROGRAM/END simply stores the sequence for future use.

Salvo Sequence Programming Instructions

The SalvoSwitching feature is a method of switching video from several cameras as a synchronized group on two or more monitors.

A practical example of the SalvoSwitching feature is an eight story parking garage where each level has five cameras. The system may be programmed to enable five monitors to display the garage one floor at a time. When in the Run mode, the system will switch from floor to floor displaying each group for a pre-selected dwell time.

Before the SalvoSwitching feature can be programmed, it must be understood how the Allegiant system executes a SalvoSwitching program. The simplest way to think of the program information is in terms of a spreadsheet type table consisting of steps, where each step contains four columns of information.

The table shown below is a typical sequence used to illustrate the SalvoSwitching feature:

Step	Cam #	Mon #	Dwell
1	1	1	SALVO
2	3	2	SALVO
3	5	3	SALVO
4	6	4	SALVO
5	8	5	5
6	2	1	SALVO
7	4	2	SALVO
8	7	3	SALVO
9	9	4	SALVO
10	12	5	5

The program above uses five display monitors (1-5) to salvo switch two groups of cameras. The first group of cameras is 1,3,5,6 and 8. The second is 2,4,7,9 and 12. The SALVO dwell command is entered by keying in '61'. A SALVO entry indicates that the step will be performed concurrently with the next step. Therefore, in the above program, cameras 1,3,5,6 and 8 will be displayed on monitors 1,2,3,4 and 5, respectively, for 5 seconds before being replaced by cameras 2,4,7,9 and 12 for 5 seconds.

Sequence Control Instructions

This program will continue to sequence between these two groups of cameras for a five second dwell as long as the Allegiant system is in the Run mode.

If it is desired in the program to stop the display at a particular set of salvo switched cameras, simply replace the dwell time for that group of cameras with the HOLD command. For example, in step 5 of the sample sequence, replacing the dwell time of 5 seconds with the HOLD command will display cameras 1,3,5,6 and 8 on monitors 1 through 5 until the operator continues execution of the program by depressing the RUN button.

As with any sequence, the operation of a SalvoSwitching feature sequence may be controlled from the keyboard with the PREVIOUS, NEXT, RUN, and HOLD keys (see the appropriate section of the manual). These keys treat each group of salvo switched cameras as though they were a single step; the cameras in the group always switch in unison. When the sequence is running backwards, the camera groups SALVO switch the same as when it is running forwards.

Sequence Function Summary

All programming key functions are summarized in the following table:

PROGRAM/END	Selects or terminates program mode
CLEAR	Clears current entry
ENTER	Store current entry
PREVIOUS	Store entry and move up one step
NEXT	Store entry and move down one step; add new step if necessary
ON/IN	Insert step before current step
OFF/OUT	Delete current step
UP	Move up one step
DOWN	Move down one step, if step already exists
LEFT	Move prompt left one cell
RIGHT	Move prompt right one cell
LOCK/DELETE	Erase all steps after current step
RUN/EXECUTE	Exit, store, load, and run current sequence

EXAMPLE: PROGRAM 10 ENTER 1 RIGHT 1 RIGHT 2 NEXT 2 NEXT 3 NEXT 4 NEXT 5 ENTER RUN/EXECUTE

The above program (sequence #10) will sequence cameras 1 through 5 on monitor 1 with each camera having a dwell of 2 seconds.

Request/Clear a Sequence

A previously programmed sequence can be 'loaded' using the following steps:

1. Press SEQUENCE and verify that the SEQUENCE indicator lights.
2. Key in the sequence number using the numeric keypad. This must be a number from 1 to 60.
3. Press ENTER.

Note that since sequences may use more than one monitor, all monitors required for this sequence must be available by not having a sequence currently on them. This rule is overridden if the same user or a user with a higher priority than the user who loaded any conflicting sequences attempts to load the new one. It is also possible to unload a sequence by entering no data for the sequence number. This will set the on-screen status prompt to '00' and free the monitors for other use.

EXAMPLE: SEQUENCE 10 ENTER

The above example 'loads' sequence number 10 into the monitor currently 'connected' to the keyboard. Note that this action does not start the sequence running. The status display area of the monitor will indicate the sequence number in the appropriate location if the status display option has not been disabled.

EXAMPLE: SEQUENCE ENTER

This example unloads any sequence from the monitor currently connected to the keyboard.

Run a Sequence

To run a sequence currently 'loaded' in the monitor, press RUN.

EXAMPLE: RUN

If the sequence was stopped, the above RUN command will start it sequencing. The direction of the sequencing will be indicated in the monitor status display by a directional arrow and the letter 'R' to the right of the sequence number (if the status display mode is selected). If RUN is pressed while a sequence is already running, the switcher goes immediately to the next step in the sequence, and continues to run. Holding RUN down produces a 'quick-scan' effect. If RUN is pressed when no sequence is 'loaded', an error will result. If the monitor is in alarm, the RUN key will control the switching of alarm video rather than a loaded sequence.

Stop a Running Sequence

To stop a running sequence, press HOLD.

EXAMPLE: HOLD

The above command will stop a sequence if one is currently running. If the sequence is already stopped, pressing HOLD will have no effect. If no sequence is currently 'loaded', pressing HOLD will result in an error condition. The monitor status display will show an 'S' to the right of the sequence number. If the monitor is in alarm, the HOLD key will stop the alarm switcher rather than a loaded sequence.

Controlling the Direction of a Sequence

The direction of executing steps can be set to forward or reverse; the sequence can also be manually stepped with the following commands:

1. To set the sequence direction forward and go to the next step, press NEXT.
2. To set the sequence direction reverse and go to the previous step, press PREVIOUS.

If NEXT is pressed with the sequence in the stop state, the sequence switches forward and remains stopped. If the sequence is running when NEXT is pressed, it immediately goes to the next step and continues to run. The same is true for the PREVIOUS key, but in the reverse direction. If either NEXT or PREVIOUS is held down, a 'quick-scan' effect switching at a rate of approximately two steps per second will take place. If no sequence is 'loaded', pressing NEXT or PREVIOUS will produce an error indication. When sequences are first 'loaded', their direction defaults to forward.

EXAMPLE: PREVIOUS

The above command pressed while a camera sequence is running will reverse the sequence. Also note that if PREVIOUS is pushed while in HOLD and the display is showing the forward prompt, the first push will change the direction only, and a second push will then switch to the previous step. The same is true for NEXT in the opposite direction. The monitor status display will show an arrow pointing either up or down indicating the direction of the sequence. The arrow will be to the right of the sequence number, either above or below the sequence run (R) or stopped (S) indicator. If the monitor is in alarm, the PREVIOUS and NEXT keys will control the alarm switcher rather than the loaded sequence.

Lock Commands

Locking a Monitor

Monitors that are locked can not be manually switched except by the user who created the lock or by those users with a higher priority. Note that if a user with a higher priority accesses a locked monitor and switches to a different camera, the lock will automatically be removed. Perform the following steps to 'lock' a monitor:

1. Press MONITOR.
2. If the monitor to be locked is not the one currently 'connected' to the keyboard, enter the monitor number using the numeric keypad (do NOT press ENTER).
3. Press LOCK.
4. Press ON. The locked monitor status display will show the "M_L" prompt to indicate that this monitor is locked.

EXAMPLE: MONITOR 2 LOCK ON

The above steps will lock monitor number 2.

Unlocking a Monitor

Locked monitors can be unlocked by the user who locked it or by users with a higher priority. Perform the following steps to unlock a monitor:

1. Press MONITOR.
2. If the monitor to be unlocked is not the one currently 'connected' to the keyboard, enter the monitor number using the numeric keypad (do NOT press ENTER).
3. Press LOCK.
4. Press OFF.

EXAMPLE: MONITOR 2 LOCK OFF

The above steps will unlock monitor number 2.

Locking a Remote Device

Locking a remote device stops unauthorized users from controlling any of the receiver/driver functions associated with that camera. Remote devices that are locked can only be controlled by the user who locked it or by those users with a higher priority. Perform the following steps to lock a remote device:

1. If the remote device number (camera number) is not the one currently being 'controlled' by the keyboard, enter the number using the numeric keypad (do NOT press ENTER).
2. Press LOCK.
3. Press ON. When viewing the locked camera, the monitor status display will show the "R_L" prompt to indicate that this camera's remote device is locked.

EXAMPLE: 2 LOCK ON

This example will lock the remote control capability on camera number 2.

Unlocking a Remote Device

Locked devices can be unlocked by the user who locked it or by operators with a higher priority. Perform the following steps to unlock a remote device:

1. Key into the numeric pad the number of the remote device (camera number) to be unlocked (do NOT press ENTER).
2. Press LOCK.
3. Press OFF.

EXAMPLE: 2 LOCK OFF

This example will unlock remote device number 2, permitting control over the camera's receiver/driver functions by all users.

Controlling Camera Movement

General

Camera positioning is controlled via an eight-way joystick (four buttons on TC8551A and TC8554 type keyboards) on the right hand side of the keyboard. This joystick moves the camera pan/tilt, if equipped, up, down, left, right or diagonally. To operate the pan/tilt, use the following procedure:

1. Move it left to pan the camera left.
2. Move it right to pan the camera right.
3. Move it up to tilt the camera up.
4. Move it down to tilt the camera down.

EXAMPLE: Pressing up and right simultaneously will move the camera diagonally up and to the right.

Lens Control

On the left side of the keyboard are the lens control rocker switches. The camera's zoom lens, if equipped, can be controlled to zoom in or out, focus near or far, and open or close the iris (if the lens has manual iris override capability). Lens control is carried out by pressing the lens rocker switches in one of two possible directions as follows:

1. Press ZOOM to zoom in or out (rotate the joystick knob on TC8553 and TC8555 type keyboards).
2. Press FOCUS to focus far or near.
3. Press IRIS to open or close the iris.

EXAMPLE: Pressing ZOOM will cause the lens to either zoom in or out. The direction is a function of the lens type and wiring, but direction can be reversed through a DIP switch change in the receiver/driver if desired.

Recording Camera Pre-Position

A user can record and store a camera position for later push-button recall. Please note that although the capability exists in the receiver/drivers, the pan/tilt and zoom lens must have the necessary options for pre-position operation. If the AutoDome™ series of dome cameras is being used, certain preposition commands are also used to activate operational features and functions. A summary list of the various AutoDome commands is included in the Appendix section of this manual for your reference. Refer to the AutoDome user manual for complete information. To record a camera position, use the following steps:

1. Move the appropriate camera to the desired position.
2. Press the SET key and verify that the SET indicator lights.

3. Press the desired position number using the numeric keypad.
4. Press ENTER.

EXAMPLE: SET 2 ENTER

The above example will store the position of the pan/tilt and zoom settings into memory for later recall.

Recalling the Pre-Position

A prerecorded camera position can be recalled using the following steps:

1. Press the SHOT key and verify the SHOT indicator lights.
2. Key in the number of the scene to be recalled using the numeric keypad.
3. Press ENTER.

EXAMPLE: SHOT 2 ENTER

The above example will recall the position stored in location 2 and automatically move the pan/tilt/zoom to return to the prerecorded scene. Note that if a second pre-position is called prior to the completion of the first, the camera will move directly to the second shot. If the AutoDome™ series of dome cameras is being used, certain preposition commands are also used to activate operational features and functions. A summary list of the various AutoDome commands is included in the Appendix section of this manual for your reference. Refer to the AutoDome user manual for complete information.

Clearing a Pre-Position

A stored pre-position may be cleared using the following steps:

1. Press the SET key and verify the indicator lights.
2. Press 9 followed by the pre-position number.
3. Press ENTER.

EXAMPLE: SET 905 ENTER

The above example will clear pre-position number 5 from the receiver/driver of the camera currently being viewed. Note that this capability can only be used with newer TC8561A Series receiver/drivers that are compatible with this feature. If the AutoDome™ series of dome cameras is being used, certain preposition commands are also used to activate operational features and functions. A summary list of the various AutoDome commands is included in the Appendix section of this manual for your reference. Refer to the AutoDome user manual for complete information.

Set Auxiliary Functions On

Users can activate certain auxiliary functions provided by the receiver/driver of a so-equipped camera by performing the following steps:

1. Press ON and verify the ON indicator lights.
2. Key in the auxiliary function number using the numeric keypad.
3. Press ENTER.

EXAMPLE: ON 3 ENTER

The above example will activate receiver/driver auxiliary number 3 on the camera currently being viewed. Note that the first 4 auxiliaries correspond to relay outputs in the receiver/drivers (Aux 1 in the TC8561A Series are solid state relays strapped to the same voltage as the pan/tilt output). These can be configured by option switches in the receiver/driver as either 'latching' or 'momentary' type functions. If configured for the 'latching' type, the auxiliary will stay on once activated until turned off. If configured as 'momentary', the auxiliary remains on only as long as the ENTER key is held down. The auxiliary outputs 2 through 4 can also be configured as a contact closure, 24 volts AC, or as line voltage. Auxiliary number 5 controls the DITHER function, which is explained in more detail later in this section. Auxiliary number 6 corresponds to an internal receiver/driver AUTO-PANNING feature which must be previously enabled by an option switch inside the receiver/driver. If the AutoDome™ series of dome cameras is being used, certain auxiliary commands are also used to activate operational features and functions. A summary list of the various AutoDome commands is included in the Appendix section of this manual for your reference. Refer to the AutoDome user manual for complete information.

Set Auxiliary Functions Off

To deactivate an auxiliary currently latched 'on', perform the following steps:

1. Press OFF and verify the OFF indicator lights.

2. Key in the auxiliary function number to be turned 'off' using the numeric keypad.

3. Press ENTER.

EXAMPLE: OFF 2 ENTER

The above example will deactivate auxiliary number 2 in the receiver/driver of the camera currently being viewed. If the AutoDome™ series of dome cameras is being used, certain auxiliary commands are also used to activate operational features and functions. A summary list of the various AutoDome commands is included in the Appendix section of this manual for your reference. Refer to the AutoDome user manual for complete information.

Dither Control

The DITHER function is a receiver/driver operation intended for applications where very low-light level cameras are used. Its function is to prevent bright lights in the scene from burning a spot on the camera imager. If the pan/tilt is not moved for a period of about 2 minutes, the receiver/driver will automatically pan right for approx. 0.5 seconds. Two minutes later, a pan left will occur and the cycle will continue until disabled. The feature is selected by an option switch in the receiver/driver and is controlled by the auxiliary 5 function. To control the DITHER function, perform the following steps:

1. Press ON or OFF and verify the indicator lights.
2. Key in number 5 using the numeric keypad.
3. Press ENTER.

EXAMPLE: ON 5 ENTER

The above example will turn on the DITHER function on the camera currently being viewed. Note that the option switch in the receiver/driver must be enabled for this feature to work. On newer versions of the receiver/driver, the pan/tilt unit will make one short Left/Right cycle to indicate that the dither function has been activated. Note that a camera in the DITHER mode will accumulate a viewing error if left unattended for a long period of time, so occasionally a manual adjustment of the pan/tilt may be required.

Alarm Control Commands

General

Alarm commands are used to control the system's automatic video switching capabilities in response to alarm signals from the Alarm Interface Unit. The camera activated by an alarm is normally the same as the alarm number, but this relationship can be changed using the optional TC8850 Graphical User Interface software or the optional TC8x59 Master Control Software package. The TC8850 and the TC8x59 software packages even permit up to 4 cameras to be alarmed by a single alarm input.

Arm Alarm for Monitor

The instruction below can be used to arm an individual alarm on the monitor currently 'controlled' by the keyboard:

1. Press ALARM and verify the indicator lights above the key.
2. Key in the alarm number to be armed using the numeric keypad.
3. Press ON.

EXAMPLE: ALARM 2 ON

The above example will arm alarm number 2. The monitor status display will show a "C_A" (camera/alarm armed) whenever a camera whose alarm is armed is selected.

Disarm Alarm for Monitor

This instruction disarms an individual alarm on the monitor currently 'controlled' by the keyboard.

1. Press ALARM and verify the indicator lights above the key.
2. Key in the alarm number to be disarmed using the numeric keypad.
3. Press OFF.

EXAMPLE: ALARM 2 OFF

The above example will disarm alarm number 2 on the current monitor.

Arm All Alarms for Monitor

The following steps will arm all alarms on the monitor currently 'controlled' by the keyboard:

1. Press USER and verify the indicator lights above the key.
2. Press ALARM and verify the indicator lights above the key.
3. Press ON.

EXAMPLE: USER ALARM ON

The above example will arm all alarms on the 'controlled' monitor.

Disarm All Alarms for Monitor

The following steps will disarm all alarms on the monitor currently 'controlled' by the keyboard.

1. Press USER and verify the indicator lights above the key.
2. Press ALARM and verify the indicator lights above the key.
3. Press OFF.

EXAMPLE: USER ALARM OFF

The above example will disarm all alarms on the 'controlled' monitor.

Arm Monitor

The following steps will arm the monitor currently 'controlled' by the keyboard. This will then permit cameras for armed alarms to be automatically displayed when an alarm occurs.

1. Press USER and verify the indicator lights above the key.
2. Press MONITOR.
3. Press ON.

EXAMPLE: USER MONITOR ON

The above example will arm the monitor. currently being 'controlled' by the keyboard. Note: Alarm video will appear on a given monitor only if the monitor is armed and the alarm is armed for that monitor. The monitor status display will show a "M_A" (monitor armed).

Disarm Monitor

The following steps will disarm the monitor currently 'controlled' by the keyboard. This will then prohibit the monitor from responding to alarms.

1. Press USER and verify the indicator lights above the key.
2. Press MONITOR.
3. Press OFF.

EXAMPLE: USER MONITOR OFF

The above example will disarm the monitor currently being 'controlled' by the keyboard.

Acknowledge Alarm Signal

The ACKNOWLEDGE key is provided so that system users can respond to alarms from the keyboard. If a logging printer is attached, this acknowledgment will be printed.

Pressing ACKNOWLEDGE while the keyboard is beeping due to an alarm condition will silence the beeper. In the predefined "SEQUENCE and DISPLAY" alarm response mode, subsequent presses of the ACKNOWLEDGE key will clear alarm video from the monitors. **If the monitor's alarm sequencer is running, it must be stopped (with the HOLD key) before video can be cleared in this manner.** Alarm video cannot be cleared using the ACKNOWLEDGE key in the predefined "BASIC" or "AUTO-BUILD" alarm response modes. The behavior of the ACKNOWLEDGE key can be reprogrammed at will with the optional TC8850 Graphical User Interface software or the optional TC8x59 Master Control Software package.

1. Press ACKNOWLEDGE twice.

EXAMPLE: ACKNOWLEDGE (beeper is silenced)
ACKNOWLEDGE (video is cleared)

The above example demonstrates the user's response to an alarm condition.

KEYBOARD USER FUNCTIONS

General

User functions are keyboard operations which are used infrequently and do not demand their own keys. The various functions are listed in the table below.

Note that certain functions are restricted to certain user priority levels. Information on user priority levels can be found in the section on User Information. To execute these user functions, select the desired function, then follow the steps below. Each function is described in its own section with additional instructions.

1. Press USER and verify the indicator lights above the key.

2. Key in the desired user function number using the numeric keypad.
3. Press ENTER. Note that the keyboard camera display will show a "F" followed by the function number selected.
4. Follow the directions for the specific user function as described in its own section.
5. Press USER to exit back to normal mode.

EXAMPLE: USER 1 ENTER

The above example will access user function #1 as described in the section below.

Fn#	Joystick Up/Down	Joystick Left/Right	Function Description	Access Level		
				1	2-7	8
1	n/a	n/a	Local keyboard test	Y	Y	Y
2	n/a	n/a	Show keyboard port number	Y	Y	Y
3	n/a	n/a	Select keyboard beeper on/off	Y	Y	Y
4	Up/down	Left/right	Adjust position of monitor display	Y	Y	N
5	Brightness	Msg vs. Stat	Monitor display brightness / status selection	Y	Y	N
6	Time/date On/Off	Overlay On/Off	Select monitor display option	Y	Y	N
7	Set	Select	Set time	Y	Y	N
8	Set	Select	Set date	Y	Y	N
9	Set	Select	Set Camera ID	Y	N	N
10	n/a	n/a	Change user password	Y	Y	Y
11	Select	n/a	Select Time/date format	Y	N	N
12	n/a	n/a	Default all monitor overlays	Y	N	N
13	Select	n/a	Print configuration tables to system printer	Y	N	N
14	n/a	n/a	Reserved	--	--	--
15	n/a	n/a	Reset system (password required)	Y	N	N
16	Select	Enable/Disable	Time Event Enable/Disable	Y	N	N
17	Set	Select	Set Monitor ID	Y	N	N
18	Select	n/a	Print Sequence	Y	N	N
19	Select	n/a	Select alarm response (password req'd)	Y	N	N
20	Select	n/a	Select printer verbosity	Y	N	N
21	Select	n/a	Designate alarm monitor type (password)	Y	N	N
22	Select	n/a	Select control code format (fixed/variable)	Y	N	N
23	n/a	n/a	Display CPU software version number	Y	Y	Y
24	Up/down	Left/right	Set positions on all monitor displays	Y	Y	N
25	Brightness	Msg vs. Stat	Set brightness on all monitor displays	Y	Y	N
26	Time/date	Overlay	Set display options on all monitors	Y	Y	N
27	Keyboard Log-in	Select	Select Keyboard Log-in mode	Y	N	N
28	Console Log-in	Select	Select Console Log-in mode	Y	N	N
29	Default Parameters	Select	Default RS-232 Parameters	Y	N	N
30	Console Parameters	Select	Set Console RS-232 Parameters	Y	N	N
31	Printer Parameters	Select	Set Printer RS-232 Parameters	Y	N	N
32	Alarm Parameters	Select	Set Alarm RS-232 Parameters	Y	N	N
33	n/a	n/a	Display User Number and Priority	Y	Y	Y

User Function 1 - Local Keyboard Test

User function 1 can be used as a local test to ensure that all the keyboard's LEDs and switches are in working order. **This function will also automatically calibrate the center position of the analog joystick on TC8553 and TC8555 type keyboards.** Upon entering this test, the keyboard will beep and all the LEDs will light for about two seconds. The USER should note if there are any LED failures during this time.

Each key may be pressed to display a unique code number associated with that key. Follow the table below to ensure that all keys are properly being processed by the keyboard. Values for TC8550A, TC8553, and TC8551A type keyboards are listed in column "A". Values for TC8554 and TC8555 type keyboards are listed in column "B". Push the USER key last, as this will cause the keyboard to exit from the test mode.

If the log-on system feature has been selected by the system installer, the same local test may be initiated while the keyboard is not "ON LINE" by pressing the "*" key.

Keyboard Type			Keyboard Type		
Key	"A" No.	"B" No.	Key	"A" No.	"B" No.
IRIS UP	034	044	CAMERA	000	024
IRIS DOWN	035	045	MONITOR	002	008
FOCUS UP	032	042	ACKNOWLEDGE	026	005
FOCUS DOWN	033	043	PROGRAM	022	002
ZOOM UP	038	041	SET	036	001
ZOOM DOWN	039	040	SHOT	008	009
ALARM	025	004	OFF	017	025
MEMORY	037	—	ON	019	017
USER	012	000	*	003	016
SEQUENCE	023	032	LOCK	020	003
HOLD	018	036	#7	015	012
RUN	021	033	#8	011	020
PREVIOUS	027	035	#9	006	028
NEXT	024	034	CLEAR	007	037
#1	013	010	#0	016	013
#2	009	018	ENTER	001	029
#3	004	026	UP	028	052
#4	014	011	RIGHT	031	051
#5	010	019	DOWN	030	050
#6	005	027	LEFT	029	053

Note that TC8553 and TC8555 type keyboard tests will show a speed indicator value in the first digit position when performing pan, tilt, or zoom actions.

Also, the zoom control of the TC8553 will indicate a value of X38 when rotated in the clockwise direction and X39 in the counter clockwise direction. The zoom control of the TC8555 keyboard will indicate a value of X41 when rotated in the clockwise direction and X40 in the counter clockwise direction.

User Function 2 - Show Keyboard Port Number

User function 2 may be used to identify which port a keyboard is plugged into. After entering user function 2, read the keyboard port number from the monitor display on the keyboard. Press USER to exit.

User Function 3 -

Select Keyboard Beeper ON / OFF

When user function 3 is selected, the keyboard user may enable or disable the keyboard audio beeper. After entering user function 3, press ON to enable the beeper or OFF to disable it. Press USER to exit. Note that this setting will automatically be set to ON upon power up of the keyboard and whenever the Allegiant system undergoes a reset.

User Function 4 -

Adjust Position of Monitor Overlay

User function 4 allows the characters on the video monitor display to be positioned from the keyboard. Only the display on the monitor the keyboard is currently 'connected' to will be effected.

After entering user function 4, use the joystick to position the display as required. Press USER to exit.

User Function 5 -

Monitor Display Brightness / Status Selection

The white portion of the characters on the video monitor display may be made brighter or dimmer by the user 5 feature. Only the display on the monitor the keyboard is currently 'connected' to will be effected. After entering the mode, there are four possible settings; moving the joystick up will increase the brightness and moving the joystick down will decrease the brightness.

The user 5 mode also permits selection of either the 'status' display or a 12 character 'monitor message' to appear in the first line of the monitor display. The 'status' display will indicate alarm, sequence, and lockout information regarding the monitor. The 'monitor message' is a stationary display. This means the display will not change as the video is switched from camera to camera on the monitor. After entering the mode, moving the joystick left will select the 'monitor message' format and moving the joystick right will select the 'status' format. To exit the mode, press USER.

User Function 6 - Select Monitor Display Option

The user 6 mode allows the user to remove the time & date, the left side portion of the display (on TC8300, TC8600, and TC8800 systems only), or to remove the entire display from the individual monitor. After entering the mode, moving the joystick down will blank the time & date from the screen. This is sometimes desirable when a VCR with its own time & date is being used. Moving the joystick up will add the time & date back again.

Moving the joystick left will blank the left side portion of the display (the entire display will be blanked on TC8500 systems) from the monitor and moving right will return it. Refer to user mode 5 to verify brightness level. Press USER to exit the mode.

User Function 7 - Set Time

User mode 7 enables the operator to set the time as displayed on all the monitors in the system. After entering the mode, the joystick is used to select hours, minutes, or seconds in an edit line displayed on the monitor screen. Moving the joystick up or down counts the data item up or down while moving right or left selects between data items. The NEXT key is used to set the seconds to zero. If NEXT is pressed when the seconds are over 30, the minute count (shown on the operating clock display) is incremented. If NEXT is pressed when the seconds are under 30, the minutes are left unaffected. Pressing ENTER updates the time displayed on all system monitors. Press USER to exit the mode.

User Function 8 - Set Date

User mode 8 enables the operator to set the date as displayed on all the monitors in the system. After entering the mode, the joystick is used to select the day, month, or year in an edit line displayed on the monitor screen. Moving the joystick up or down counts the data item up or down while moving right or left selects between the data items. Pressing ENTER updates the date displayed on all system monitors. Press USER to exit the mode.

User Function 9 - Set Camera ID

User 9 provides the capability of entering a 16 character camera identification message that appears on the video monitor display whenever that specific camera is called up for viewing. If desired, this message can be used to identify the particular scene being viewed. Refer to the Character ROM Tables at the end of this manual for the various characters available. After entering the mode, Users with the priority level 1 can use the joystick to move right or left to select the character to be changed. The selected character will be identified by a box with a question mark inside it. The first line of the video monitor screen will indicate the code number of the character selected. Move the joystick up or down to single step through the character ROM table, or enter

the character's number as identified in the Tables using the numeric keypad and press ENTER. Once the title has been set, press ENTER to store the updated title into memory. Press USER to exit the mode.

User Function 10 - Change USER Password

User function 10 allows an operator to change system access passwords. This feature would only be required in systems where the keyboard log-in and password security feature has been enabled by the system installer. After entering the mode, the video monitor display will prompt the user for the current password by displaying "OLD PASSWORD". Enter the current user password using the numeric keypad and press ENTER. If the system does not accept the old password, the prompt will not proceed past this point. If the entered password is valid, the display will change to the "NEW PASSWORD" prompt for entering the new password. Key in the new password (up to 6 numerals) using the numeric keypad and press ENTER. You may also leave this step blank if no password is desired. If none is used, all that is required when you log-on to the system in the future is to press ENTER at the "P" prompt. To safeguard against typographical errors, the system will then prompt you with "VERIFY PASSWORD" to reenter the new password for verification. If the entered passwords do not agree, the system will require reentry and verification of the new password. If the two password entries agree, the video monitor prompt will indicate "PASSWORD UPDATED". Press USER to exit the mode.

User Function 11 - Select Time / Date Format

Users with the priority level 1 can use User function 11 to select the time and date format used throughout the system. Two formats of time are available - 12 hour mode and 24 hour mode. The date is available in a 'MM-DD-YY' format (U.S.), a 'DD-MM-YY' format (Int'l), and a 'YY-MM-DD' format (Asian). After entering the mode, move the joystick up or down to select the desired format. Press ENTER to convert the system to the format chosen. Press USER to exit the mode.

User Function 12 - Default All Monitor Overlays

Users with the priority level 1 can use User 12 to reset all monitor overlays to their default characteristics: bottom center of screen, full brightness. After entering the mode, press ENTER to reset all monitor overlays. Press USER to exit.

User Function 13 -

Print System Configuration Tables

Users with the priority level 1 can use this function to print the contents of the various tables programmed in the system. Move the joystick up and down to select a table, then press ENTER to send it to the printer port. Press USER to exit this function.

User Function 14 - Reserved Function

User Function 15 - System Reset

The system may be reset from the keyboard by users with priority level 1. After entering this mode, the video monitor screen will indicate "RESET SYSTEM". The user should then key in his password using the numeric keypad and press ENTER. The system will then reset. Press USER to exit the mode without resetting the system.

NOTE THAT THE SYSTEM SHOULD BE RESET WHENEVER A CHANGE IS MADE ON THE MAIN CPU MODULE'S DIP SWITCHES.

Alternatively, the main power to the CPU bay may be switched off for 10 seconds then restored. Depending on the size and complexity of the system, several seconds may be required before operation is restored. This time is due to the amount of initialization tasks which must be performed and is considered normal.

User Function 16 - Time Event Enable/Disable

Users with the priority level 1 can use this function to enable or disable any of the programmed time event functions. Up to 64 different time event functions can be programmed with the optional TC8850 Graphical User Interface software or the optional TC8x59 Master Control Software. Moving the joystick up and down steps through a table of the 64 time events. If an event has been programmed, moving the joystick to the right enables the event, and moving the joystick to the left disables it. Also, the current status of an enabled time event will be displayed by this user function.

User Function 17 - Set Monitor ID

Users with the priority level 1 can use User 17 to enter a 12 character monitor identification message that can be displayed in the top line of the monitor overlay display on any of the system's monitors. This monitor title will be visible on the display regardless of the camera currently being viewed. If desired, this message can be used to identify the particular monitor or the name of a specific group of cameras assigned to this monitor. Refer to the Character ROM Tables at the end of this manual for the various characters available. After entering the mode, the joystick is moved right or left to select the character to be changed. The selected character will be identified by a box with a question mark inside it. The first line of the video monitor display will indicate the code number of the character selected. Move the joystick up or down to single step through the character ROM table; or enter the character's number as identified in the Tables using the numeric keypad, and press ENTER. Once the monitor title has been set, press ENTER to store the updated title into memory. Press USER to exit the mode. The user may select between this monitor message and the status display by using the USER 5 Function as described above.

User Function 18 - Print Sequence

This function is used to print the contents of a programmed sequence. Users with priority level 1 can use the joystick to select the desired sequence, then press ENTER to print it to the printer port. Note that only those sequences currently existing in memory will be shown in the list. Press USER to exit.

User Function 19 - Select Alarm Response

Users with the priority level 1 can use this function to reset the system to one of the three predefined alarm response modes. Move the joystick up or down to select the desired mode - BASIC, AUTOBUILD, or SEQUENCE & DISPLAY. Then key in your user password on the numeric keypad and press ENTER to update the alarm system. Press USER to exit.

User Function 20 - Select Printer Verbosity

Users with the priority level 1 can use this function to select between two different print modes -- Limited Printing and Full Printing. This selection determines the amount of information that is printed during alarm processing. Both modes will print alarm activation and deactivation messages, but Full Printing goes into much more detail. Use the joystick to select the desired mode, then press ENTER. Press USER to exit without changing the print mode.

User Function 21 - Designate Alarm Monitor Type

Users with the priority level 1 can use this function to designate alarm monitors as either a STEP (also called SEQUENCE) monitor or a REVIEW (also called DISPLAY or CONTROL) monitor. To designate a monitor as either the STEP monitor or the REVIEW monitor, enter User Function 21. Then move the joystick up or down to select the monitor type. Key in your password on the keyboard and press ENTER. Then press USER to exit. After selecting new STEP and REVIEW monitors, the previous ones may be disarmed (see ALARM CONTROL COMMANDS, Disarm Monitor in the manual).

User Function 22 - Select Control Code Format

This function is used to designate whether variable speed pan/tilt and zoom commands are enabled (factory default setting). In most cases, there is no need to disable this function. If it becomes necessary to enable or disable variable speed operation, users with priority level 1 can enter this user function. Move the joystick up or down to select the desired setting, then press ENTER. Press User to exit.

User Function 23 -

Display CPU Software Version Number

Users can use this function to display the revision number of the Allegiant's CPU software on the monitor screen. Once the user function is entered, the CPU software revision number will be displayed on the monitor screen.

User Function 24 -

Set Positions On All Monitor Displays

This function is similar to user function 4 except it changes the monitor display positions of all monitors in the system.

After entering user function 24, use the joystick to position the display as required on the monitor the keyboard is controlling. Press ENTER to store and change all system monitor displays to this position. Press USER to exit.

User Function 25 -

Set Brightness on All Monitor Displays

This function is similar to User function 5 except it changes the monitor display brightness of all monitors in the system.

The white portion of the characters on the video monitor displays may be made brighter or dimmer by the User 25 feature. After entering the mode, there are four possible settings; moving the joystick up will increase the brightness and moving the joystick down will decrease the brightness. Once the display on the monitor the keyboard is currently controlling is adjusted, press ENTER to change all system monitors to the same setting. Press USER to exit the mode.

The User 25 mode also permits selection of either the 'status' display or a 12 character 'monitor message' to appear in the first line of the monitor display. The 'status' display will indicate alarm, sequence, and lockout information regarding the monitor. The 'monitor message' is a stationary display. This means the display will not change as the video is switched from camera to camera on the monitor. After entering the mode, moving the joystick left will select the 'monitor message' format and moving the joystick right will select the 'status' format on the monitor the keyboard is controlling. Press ENTER to change all system monitors to the same setting. To exit the mode, press USER.

User Function 26 -

Set Display Option On All Monitors

This function is similar to user function 6 except it is used to select the monitor display option of all monitors in the system. The User 26 mode allows the user to remove the time & date, the left side portion of the display (on TC8300, TC8600, and TC8800 systems only), or to remove the entire display from the system monitors. After entering the mode, moving the joystick down will blank the time & date from the screen. This is sometimes desirable when a VCR with its own time & date is being used. Moving the joystick up will add the time & date back again.

Moving the joystick left will blank the left side portion of the display (the entire display will be blanked on TC8500 systems) from the monitor and moving right will return it. Refer to user mode 5 or 25 to verify brightness level. Press ENTER to update all system monitors to the selected format. Press USER to exit the mode.

User Function 27 -

Select Keyboard Log-in mode

This function controls the system's keyboard log-in feature. The selection is valid only if DIP switch 5 on the CPU is in the ON position. If the CPU DIP switch is OFF, then the log-in mode can not be activated. After entering the mode, the user moves the joystick up or down to select which mode the system should function in. If the log-in feature is enabled, ("MUST USE KBD PWD" is selected) the system keyboards require each user to log-in and log-off the system. All users will be required to enter a user number and the correct password before interaction with the system is permitted. If the log-in feature is disabled ("NO KBD PWD LOGIN" is selected), the system keyboards are always 'on-line' with the system.

Once the selection is made, exit the user function mode and **reset the system** either via keyboard User Function 15 or by removing and restoring the main AC power to the system. Once the system has been reset, the keyboard log-in function will be active and all system keyboards will need to be logged-in before access to the system is possible.

User Function 28 -

Select Console Log-in mode

This function controls the system's external Console port log-in feature. The selection is valid only if DIP switch 5 on the CPU is in the ON position. If the CPU DIP switch is OFF, then the log-in mode can not be activated. After entering the mode, the user moves the joystick up or down to select which mode the system should function in. If the log-in feature is enabled ("MUST USE CON PWD" is selected), any external PC or other computing device will be required to log-in before further communication with the system is possible. The external computing devices will be required to enter a user number and the correct password. If the Console log-in feature is disabled ("NO CON PWD LOGIN" is selected), the Console port is always available for communication.

Once the selection is made, exit the user function mode and **reset the system** either via keyboard User Function 15 or by removing and restoring the main AC power to the system. Once the system has been reset, the Console log-in function will be active and all external computing devices will need to log-in before access to the system is possible.

User Function 29 -

Default RS-232 Parameters

Users with priority 1 can use this function to return the system's external RS-232 ports (Console, Printer, and Alarm) to a known default state. After entering the mode, enter your password and press ENTER. The system will then reset after placing the RS-232 protocols back to their default state. Refer to the section on Factory Default Settings for more information on the default protocol settings.

User Function 30 -

Set Console RS-232 Parameters

This function permits users with priority 1 to select the RS-232 baud rate and handshake options for the system's Console port. Upon first entering the mode, the current settings will be displayed. Moving the joystick up/down selects the baud rate. Moving the

joystick left/right selects the handshake option. After being changed, the port is also automatically set to eight data bits, no parity, and one stop bit. Once the new settings have been selected, enter the user password and press Enter. Press User to exit the mode.

User Function 31 -

Set Printer RS-232 Parameters

This function permits users with priority 1 to select the RS-232 baud rate and handshake options for the system's Printer port. Upon first entering the mode, the current settings will be displayed. Moving the joystick up/down selects the baud rate. Moving the joystick left/right selects the handshake option. After being changed, the port is also automatically set to eight data bits, no parity, and one stop bit. Once the new settings have been selected, enter the user password and press Enter. Press User to exit the mode.

User Function 32 -

Set Alarm RS-232 Parameters

This function permits users with priority 1 to select the RS-232 baud rate and handshake options for the system's Alarm port. Upon first entering the mode, the current settings will be displayed. Moving the joystick up/down selects the baud rate. Moving the joystick left/right selects the handshake option. After being changed, the port is also automatically set to eight data bits, no parity, and one stop bit. Once the new settings have been selected, enter the user password and press Enter. Press User to exit the mode.

User Function 33 - Display CPU

Software Version Number

Users can use this function to display their user number and priority level on the monitor screen. Once the user function is entered, the user number will be displayed on the top line and the user's priority level will be display on the bottom line of the monitor screen. Press User to exit.

MAINTENANCE INFORMATION

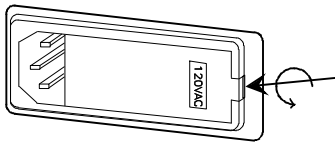
The Allegiant system has been designed to perform for long periods of time with little or no maintenance. Occasionally the need will arise to clean the keyboard, or replace a fuse. Follow the instructions below if any of these items are required.

Cleaning The Keyboard

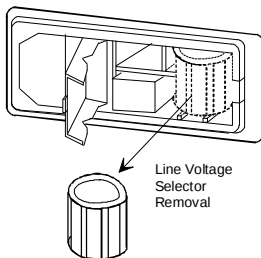
The keyboard may be cleaned whenever deemed necessary simply by temporarily removing it from the system and wiping it with a damp cloth. If a conventional spray type cleaner is required, spray the cloth first, then wipe off the surfaces. Do not use petroleum based cleaners or cleaners containing benzene, trichlorethylene, ammonia or acetone, as these cleaners could damage the plastic surfaces.

AC Line Voltage Input Selection

The AC line voltage input selector is found on the rear of the equipment bay inside the line cord connector housing. The present input voltage selection will be shown in the window of the connector housing. Remove AC line cord if the setting is incorrect. To change the setting, insert a flat blade screwdriver into the slot located at one end of the connector housing as indicated in the drawing and rotate the screwdriver until the door to the housing opens.



Remove the voltage selector wheel from the connector



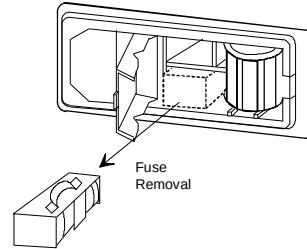
housing and rotate until the desired voltage is visible.

Reinsert the wheel back into the connector housing so that the selected voltage is facing out. Snap door closed and verify that the correct voltage selection is visible through the window. Reattach AC line cord.

AC Line Fuse Replacement

The AC line fuse on TC8805 power supply models is found on the rear of the equipment bay near the line cord connector. TC8805X power supply models (220-240 VAC input version) contain a circuit breaker equipped power switch which can be reset directly from the front. If the line fuse needs to be replaced

in a TC8805 model, remove the line cord from the system. Insert a flat blade screwdriver into the slot located at one end of the connector housing and rotate the screwdriver until the door to the housing opens. Remove fuse holder from housing as shown in drawing.



Remove fuse from holder and replace with fuse of same rating for continued protection. Reinstall fuse holder into connector housing in the same orientation as indicated by the arrow on the door cover. Snap door closed. After replacing fuse, verify system start-up and operation.

Power Supply Fuse Replacement

The main power supply is located in the far right side of the equipment bay. Remove the front panel of the bay by loosening the four fasteners. Locate the fuse to be replaced by observing the green LED indicators. Note which LED indicators are not lit, then turn off the main power switch located on the power supply. Replace fuses associated with LEDs which were not lit. Switch on the main power switch and verify that all LEDs are now lit. Replace front panel.

Replacement of Memory Backup Batteries

CAUTION: LITHIUM BATTERIES SHOULD BE REPLACED BY QUALIFIED SERVICE PERSONNEL ONLY.

The memory backup batteries are located on the main CPU card located next to the power supply module in the main CPU bay. Remove the front panel of the main CPU bay by loosening the four fasteners. The two batteries are mounted on the front edge of the CPU card and are about the size of quarters. Insert a small flat blade screwdriver into the slot on one of the battery holder sockets and gently pry the battery from the holder until it can be removed by your fingers. Replace old battery with new battery by lifting the retaining clip up while inserting the battery into the socket. Insure that the negative side of the battery contacts the socket by seating the battery until it is somewhat flush with the level of the battery holder. Repeat procedure for other battery.

Verification of the system's time and date and sequences should be made to insure no information was lost. Refer to the appropriate section of the instruction manual if any reprogramming is required.

CHARACTER ROM TABLES FOR TC8500

The characters used in generating the video monitor displays are shown in the table on the following pages. Note that in some cases, a single character may be comprised of two parts. Such characters must be entered so that the left half of the character always begins in an odd numbered column of the display title. The code numbers of these double-width characters are shown in black boxes in the table below. Refer to the section of the operating instructions covering "Select User Function" for title programming procedures.

	E R	AL	1	2	3	4	5	LINK B	C A	M A	M L	R L	A S	R S	D M	S M
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Σ	Σ	Σ	Σ			↑ R	↑ S	↓ R	↓ S	↑ R	↑ S	↑	↓	?		
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/	
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	
0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?	
48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	
P	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	
P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_	
80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	
96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	
p	q	r	s	t	u	v	w	x	y	z	{		}	~	Δ	
112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	
Q	ü	é	â	ä	à	ã	ç	ê	ë	è	ï	î	ì	ä	å	
128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	
É	æ	Æ	ô	ö	ò	û	ù	ÿ	ö	Ü	Ç	£	¥	℞	f	
144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	
á	í	ó	ú	ñ	Ñ	ª	º	¿	¬	¬	½	¼	¡	«	»	
160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	
BU INDU	IR STRIE	IE S,INC	△	△	△	泰	視	頻	系	統	♂	♀	尸	月	*	
176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	
	†	!!	¶	§		‡	↑	↓	→	←	↔	⚡	⚡			
192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	
st	nd	rd	th	R D	R M	S T	E	IN	JS	E>	W	⊕	⊗	SLD SIS	IS E	
208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	
α	β	Γ	π	Σ	σ	μ	τ	θ	θ	Ω	δ	ω	φ	€	π	
224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	
≡	±	≥	≤	↑	J	÷	≈	°	.	.	J	n	z	■		
240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	

CHARACTER ROM TABLES FOR TC8600 AND TC8800

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
DM	SR	LINK						▲R	▲S	▼R	▼S	↑	↓	□?	□
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
Q	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
p	q	r	s	t	u	v	w	x	y	z	{		}	~	△
112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
Q	ü	é	â	ä	à	ã	ç	ê	ë	è	ï	î	ì	Ä	Å
128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
É	æ	Æ	ô	ö	ò	û	ù	ÿ	ö	ü	ç	£	¥	℞	ƒ
144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
á	í	ó	ú	ñ	Ñ	ª	º	¿	¬	½	¼	¿	«	»	
160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
▨	▩	▪					π	γ			π	π	π	π	γ
176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
L	L	T		-	+	+							=		±
192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
	T	π													
208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
α	β	Γ	π	Σ	σ	μ	γ	ϑ	θ	Ω	δ	ω	φ	€	Π
224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
≡	±	≥	≤	∫	J	÷	≈	°	.	.	J	n	z	■	
240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
☺	☹	♥	♦	♣	♠	•	●	○	◎	♂	♀	♂	♀	♂	♀
256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271
▶	◀	↑	!!	¶	§	-	±	↑	↓	→	←	└	↔	▲	▼
272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287

Characters 288 through 511 are blank and are intentionally not shown.

TC8600 and TC8800 Character Set (Cont'd)

512	513	514	515	516	517	518	視	系	統	523	524	525	526	527
528	529	530	531	532	533	534	535	536	537	538	539	540	541	542
544	545	546	547	548	549	550	551	552	553	554	555	556	557	558
560	561	562	563	564	565	566	567	568	569	570	571	572	573	574
576	577	578	579	580	581	582	583	584	585	586	587	588	589	590
592	593	594	595	596	597	598	599	600	601	602	603	604	605	606
608	609	610	611	612	613	614	615	616	617	618	619	620	621	622
624	625	626	627	628	629	630	631	632	633	634	635	636	637	638
640	641	642	643	644	645	646	647	648	649	650	651	652	653	654
656	657	658	659	660	661	662	663	664	665	666	667	668	669	670
672	673	674	675	676	677	678	679	680	681	682	683	684	685	686
688	689	690	691	692	693	694	695	696	697	698	699	700	701	702
704	705	706	707	708	709	710	711	712	713	714	715	716	717	718
720	721	722	723	724	725	726	727	728	729	730	731	732	733	734
736	737	738	739	740	741	742	743	744	745	746	747	748	749	750
752	753	754	755	756	757	758	759	760	761	762	763	764	765	766
768	769	770	771	772	773	774	775	776	777	778	779	780	781	782
784	785	786	787	788	789	790	791	792	793	794	795	796	797	798
799														

TC8600 and TC8800 Character Set (Cont'd)

工	巷	控	校	江	叉	左	沙	捌	三	参	山	産	算	磁	示
800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815
七	室	州	拾	洲	秋	週	十	升	哨	商	小	少	廠	招	職
816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831
色	信	心	新	安	案	位	委	椅	異	移	維	雲	影	英	衛
832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847
液	加	嘉	家	科	架	河	花	華	課	貨	各	核	隔	掛	環
848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863
監	看	管	簡	緩	艦	間	閱	館	岸	客	休	宮	救	業	局
864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879
勤	禁	緊	形	徑	携	景	計	警	輕	迎	限	固	庫	湖	顧
880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895
五	港	硬	紅	航	行	衡	講	鋼	降	坐	座	載	際	餐	司
896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911
四	子	市	指	支	止	斜	車	重	出	術	春	照	章	証	診
912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927
進	人	訊	陣	域	一	引	園	延	遠	污	央	往	駕	回	快
928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943
改	滑	玩	眼	器	基	旗	期	棄	級	給	去	近	金	銀	九
944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959
玖	具	空	月	圈	建	後	護	交	光	公	口	香	高	合	告
960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975
黑	骨	材	財	策	視	試	資	字	主	守	酒	首	準	巡	初
976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991
所	署	傷	上	城	場	情	推	水	数	世	制	成	政	整	星
992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007
晴	正	生	西	閃	前	全	造	側	息	測	速	村	多	達	棚
1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023
谷	短	端	超	長	頂	直	天	店	踏	逃	頭	鬪	動	同	堂
1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039
導	洞	道	認	年	八	伴	半	反	鼻	百	票	表	覆	分	噴
1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055
文	平	法	密	民	務	霧	名	有	遊	離	陸	立	流	路	廊
1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071
樓	老	六	青	靜	稅	石	籍	接	匝	掃	太	帶	待	泰	壇
1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087

TC8600 and TC8800 Character Set (Cont'd)

男	值	池	置	築	通	吊	電	都	督	巴	播	霸	配	倍	品
1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103
賓	頁	便	舖	北	本	明	盟	儲	目	預	幼	洋	瞭	綠	臨
1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119
雪	仙	專	戰	旋	穿	線	槍	相	裝	鎗	大	窒	中	駐	偵
1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135
訂	塔	島	東	棟	燈	灘	南	日	入	買	泊	飛	備	尾	美
1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151
腐	阜	武	部	風	副	步	輔	包	報	峯	門	欄	零	裂	聯
1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167
一	七	九	二	人	入	八	十	三	口	土	大	女	小	山	川
1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183
工	中	之	井	五	仁	元	六	公	分	卅	尺	心	手	方	日
1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199
月	火	片	王	丙	丘	主	仙	出	凸	功	北	仟	可	右	叫
1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215
台	四	外	左	市	平	民	甲	白	石	立	交	企	危	向	后
1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231
地	年	收	兵	即	坊	坑	壯	宏	局	岐	志	李	村	步	系
1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247
肖	邦	里	防	佰	兩	和	周	坡	定	宜	岸	店	往	房	放
1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263
昌	板	河	金	南	威	度	急	政	星	昱	查	柒	段	泉	省
1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279
紅	背	郊	剛	峰	旁	旅	桂	氣	浪	班	珠	矩	站	停	區
1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295
商	售	國	將	崖	排	晚	清	組	船	處	設	責	途	部	鳥
1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311
勞	博	堡	廊	廁	景	氮	湖	程	窗	絕	註	象	貳	隊	黃
1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327
黑	圓	塞	厦	敬	溝	煤	當	矮	萬	置	罩	肆	運	遂	鉛
1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343
電	團	圖	漢	福	精	臺	領	層	廣	廠	輛	器	應	總	檣
1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359
舊	轉	攝	廳	觀	庄										
1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375

QUICK REFERENCE KEYBOARD COMMAND TABLE

System Commands		
Log-on	ON n ENTER n ENTER	NOTE 1
Log-off	USER OFF	NOTE 1
Program Keyboard Memory	MEMORY n ENTER [] ENTER	NOTE 3
Run Keyboard Memory	MEMORY n RUN	NOTE 3
Switcher Commands		
Select Camera	n ENTER	
Select Monitor	MONITOR n ENTER	
Program Sequence	PROGRAM n ENTER [] ENTER	NOTE 2
Request Sequence	SEQUENCE n ENTER	NOTE 2
Run/Hold	RUN/HOLD	
Direction	PREVIOUS/NEXT	
Lock/Unlock Monitor	MONITOR n LOCK ON/OFF	NOTE 2
Remote Camera Control Commands		
Lock/Unlock Camera	n LOCK ON/OFF	NOTE 2
Move Camera	{JOYSTICK}	
Lens Control	{ROCKER SWITCHES}	
Record Position	SET n ENTER	
Recall Position	SHOT n ENTER	
Auxiliary On/Off	ON/OFF n ENTER	
Dither Control	ON/OFF 5 ENTER	
Alarm Control Commands		
Arm/Disarm Camera	ALARM n ON/OFF	
Arm/Disarm All Cameras	USER ALARM ON/OFF	
Arm/Disarm Monitor	USER MONITOR ON/OFF	
Acknowledge	ACKNOWLEDGE	NOTE 2
User Function Commands		
Local Keyboard Test	USER 1 ENTER [] ENTER	
Show Keyboard Port Number	USER 2 ENTER USER	
Select Keyboard Beeper On/OFF	USER 3 ENTER ON/OFF USER	
Adjust Position of Monitor Overlay	USER 4 ENTER {JOYSTICK} ENTER USER	NOTE 2
Monitor Display Brightness/Status	USER 5 ENTER {JOYSTICK} ENTER USER	NOTE 2
Select Monitor Display Option	USER 6 ENTER {JOYSTICK} ENTER USER	NOTE 2
Set Time	USER 7 ENTER {JOYSTICK} ENTER USER	NOTE 2
Set Date	USER 8 ENTER {JOYSTICK} ENTER USER	NOTE 2
Set Camera ID	USER 9 ENTER {JOYSTICK} ENTER USER	NOTE 2
Change User Password	USER 10 ENTER n ENTER n ENTER n ENTER USER	
Select Time/Date Format	USER 11 ENTER {JOYSTICK} ENTER USER	NOTE 2
Default All Monitor Overlays	USER 12 ENTER {JOYSTICK} ENTER USER	NOTE 2
Print System Configuration Tables	USER 13 ENTER {JOYSTICK} ENTER USER	NOTE 2
Reset System	USER 15 ENTER n ENTER	NOTE 2
Time Event Enable/Disable	USER 16 ENTER {JOYSTICK} ENTER USER	NOTE 2
Set Monitor ID	USER 17 ENTER {JOYSTICK} ENTER USER	NOTE 2
Print Sequence	USER 18 ENTER {JOYSTICK} ENTER USER	NOTE 2
Select Alarm Response	USER 19 ENTER {JOYSTICK} n ENTER USER	NOTE 2
Select Printer Verbosity	USER 20 ENTER {JOYSTICK} ENTER USER	NOTE 2
Designate Alarm Monitor Type	USER 21 ENTER {JOYSTICK} n ENTER USER	NOTE 2
Select Control Code Format	USER 22 ENTER {JOYSTICK} ENTER USER	
Display CPU Software Version Number	USER 23 ENTER	
Set Positions On All Monitor Displays	USER 24 ENTER {JOYSTICK} ENTER USER	
Set Brightness on All Monitor Displays	USER 25 ENTER {JOYSTICK} ENTER USER	
Set Display Options On All Monitors	USER 26 ENTER {JOYSTICK} ENTER USER	
Select Keyboard Log-in	USER 27 ENTER {JOYSTICK} ENTER USER	NOTE 2
Select Console Log-in	USER 28 ENTER {JOYSTICK} ENTER USER	NOTE 2
Reset RS-232 Parameters to Default	USER 29 ENTER {JOYSTICK} ENTER USER	NOTE 2
Select Console Port RS-232 Parameters	USER 30 ENTER {JOYSTICK} ENTER USER	NOTE 2
Select Printer Port RS-232 Parameters	USER 31 ENTER {JOYSTICK} ENTER USER	NOTE 2
Select Alarm Port RS-232 Parameters	USER 32 ENTER {JOYSTICK} ENTER USER	NOTE 2
Display User Number and Priority	USER 33 ENTER	

NOTE 1. This function is active only if selected by the system installer.

NOTE 2. Access to this function is based on USER priority level. Refer to the appropriate section of the operating instructions for more information.

NOTE 3. This function is **not** applicable to TC8554 and TC8555 keyboards.

ERROR MESSAGES

Error 01 - Invalid camera request

The camera number entered from the keyboard does not exist. If using the optional TC8850 Graphical User Interface software or the optional TC8x59 Master Control Software, make sure the number exists in the Camera Identification Table. Download the table to be sure.

Error 02 - Invalid monitor request

The monitor number entered from the keyboard does not exist.

Error 03 - Locked remote device

The remote device requested cannot be controlled because it is locked by a user with equal or higher priority. Check with the other users or request that a higher priority user unlock the remote device.

Error 04 - Monitor locked

The monitor requested cannot be accessed because it is locked by a user with equal or higher priority. Check with the other users or request that a higher priority user unlock the monitor.

Error 05 - Remote device access restricted

Remote locked out by Remote Lock Out Table.

Error 06 - Monitor Access Restricted

Monitor locked out by Monitor Lock Out Table.

Error 10 - Access denied

A function was requested for which your user priority is too low. Only a Priority 2 user or a supervisor with Priority 1 may access this function.

Error 11 - Access denied

A function was requested for which your user priority is too low. Only a supervisor with Priority 1 may access this function.

Error 15 - Invalid user function

The function number requested from the keyboard is invalid. Refer to the User Function Table for a listing of the valid user function numbers.

Error 20 - Acknowledge denied

The ACKNOWLEDGE button has been pressed by a user without the authority to acknowledge alarms.

Error 21 - Incorrect acknowledge

In order to properly acknowledge an alarm event, the keyboard must be switched to a monitor that is displaying the alarms.

Error 22 - Acknowledge disabled

Alarms on this monitor can not be acknowledged, because that capability has been disabled by the system programmer.

Error 23 - Camera not in alarm

The camera displayed on the monitor is not an alarm video; only alarm-generated video can be acknowledged.

Error 24 - Keyboard not enabled for acknowledge

This keyboard may not acknowledge alarm video on this monitor; it has been disabled by the system programmer.

Error 25 - Alarm switcher running

Alarm video may only be acknowledged if the alarm switcher is not running; press HOLD to stop the switcher.

Error 50 - SEQUENCE not available

The user tried to load a switcher sequence that does not exist. This is a good way to tell from the keyboard which sequence numbers are unused when desiring to add one.

Error 51 - SEQUENCE request

A request was made to load an ABSOLUTE type sequence without the keyboard being on one of the monitors in that sequence. Because inadvertent loading of monitors should be avoided, the user is required to switch his keyboard to one of the monitors used by the sequence. The PROGRAM mode may be used to review what monitors are used in the sequence.

Error 52 - SEQUENCE request

A request was made to load a RELATIVE type sequence on too high of a monitor number; the monitors used by the sequence would extend past the highest monitor. Try switching to a lower monitor number before Loading the sequence.

Error 53 - Switcher empty

The user has tried to control a sequence using the NEXT, PREV, RUN, or HOLD keys without there being a sequence loaded.

Error 55 - SEQUENCE priority

The switcher sequence being requested or cleared requires monitors that are in use by a user of equal or higher priority. Contact a user with higher priority or have the system administrator clear the monitors in question.

Error 56 - SEQUENCE request

The user has tried to load a sequence that is being edited in the PROGRAM mode. Once editing is completed, the sequence may be loaded.

Error 58 - SEQUENCE request

The sequence being requested is a relative sequence, and the user is only allowed access to absolute sequences.

Error 60 - PROGRAM request

The user has tried to program a sequence that is currently running. The sequence must first be stopped before any editing can be performed.

Error 62 - PROGRAM request

The user has tried to program a new sequence when the system is out of sequence memory space. Delete unused sequences and then program the new sequence.

Error 63 - PROGRAM request

Some other user is already programming a sequence on this monitor.

Error 70 -**Monitor not allocated to alarm monitor group**

This monitor can not be used for alarm operations; it has not been designated as alarm-capable by the system programmer.

Error 71 - Step monitor required

A group of alarm monitors may not have an armed Review (display) monitor without having armed Step (sequence) monitors.

Error 78 - Must enter alarm number

A specific alarm number must be entered when arming or disarming an alarm.

Error 80 - Trunk not available

An attempt was made to access a remote camera connected to a satellite system, but no unused trunk lines are currently available.

Error 89 - internal stack error

A stack overflow within the system has occurred. Report this to the manufacturer.

Error 90 - Keyboard entry undefined

The keyboard entry is not defined. Check the appropriate section of the instruction manual for the desired operation and try again.

Error 92 - Keyboard entry out of range

The data entered for a valid command was not in the range allowed by the system. Check the appropriate section of the instruction manual for the acceptable ranges for the command in question and try again.

Error 94 - Keyboard entry invalid

An invalid character has been received from the keyboard. Usually this would indicate a communications error. Verify that the keyboard-to-system cable is not producing an intermittent connection.

Error 95 - Keyboard entry incomplete

The control sequence sent from the keyboard was incomplete. Usually this would indicate a communications error. Verify that the keyboard-to-system cable is not producing an intermittent connection.

Error 96 - * (STAR) undefined

The * key has been pressed, but there is no definition for this button.

TROUBLESHOOTING GUIDE

The Allegiant system has been designed to perform reliably for long periods of time. All circuitry consists of state-of-the-art components designed around a modular concept. The modular concept allows quick location and replacement of suspect circuits. If system troubleshooting becomes necessary, follow the guidelines:

Main Bay Checkout

1. Main power switch is ON and power LED indicator is not lit: Check main line fuse on rear of main bay. Refer to Maintenance Information section for replacement instructions.
2. Any of the green LED indicators located on the front of the main power supply is out: Replace blown fuses associated with any unit fuse indicators.
3. Green CPU LED indicator in main CPU bay is not blinking and red LED is off: Remove power from main bay for 30 seconds. Apply power and verify LED is blinking. If not, replace microprocessor module.

If red LED is lit, replace microprocessor board batteries. Follow procedure outlined in Maintenance Information section.

4. Intermittent video output or system operation: Verify all circuit card modules are properly seated in their respective rack connectors.
5. Power Supply LEDs lit, but no power indication on modules or accessory devices: Verify proper seating of power supply within card cage. Verify that supplied retaining screws are installed.

Keyboard Checkout

1. No keyboard display indicators: Check interconnect cable for cut or broken wires between keyboard and main CPU bay. Replace cable if necessary. Relocate keyboard connector on main CPU bay to another keyboard input port. Replace keyboard.
2. Keyboard indicators lit but keyboard is inoperative: Verify keyboard is logged-on to the system (if log-on feature has been enabled). Check interconnect cable for cut or broken wires between keyboard and main CPU bay. Replace cable if necessary. Relocate keyboard connector on main CPU bay to another keyboard input port. Replace keyboard.
3. Limited keyboard functions: If possible, perform local keyboard test described in USER Function section to verify operation of all keys. If local test cannot be performed, replace keyboard.

Users of the optional TC8850 Graphical User Interface software or the optional TC8x59 Master Control Software package should refer to lockout tables to determine if problem is related to user restriction tables. If table settings are verified and no discrepancies are found, replace keyboard.

4. TC8553 keyboard Joystick not centered: If the analog joystick of the TC8553 becomes uncentered due to normal wear, it can be recalibrated by entering the Keyboard User Function 1 keyboard test. Refer to the appropriate section of the manual on Keyboard User Functions for more information.

Video Monitor Display Checkout

1. No video display on any monitor: Verify proper CPU operation as described above under main bay checkout section.
2. No video display on some monitors: Verify operational camera is selected on suspect monitors. Confirm monitor is operational. Check monitor coax connections. Verify coax connection to correct monitor output on rear of main bay. Replace video output module.
3. Poor video on monitor: Check monitor for proper termination. Check operation of known good camera directly to monitor.
4. Partial or no on-screen alphanumeric display: Check user selectable brightness feature (via USER 5 keyboard function) and then verify alphanumeric display has been enabled (via USER 6 keyboard function). Position the overlay with USER 4 function.

Remote Receiver/Driver Functions Inoperative

1. All receiver / drivers and functions inoperative: Verify power LED indicator on Signal Distribution Unit is lit. If not, check fuses on front of main CPU bay power supply. Verify the Code LED indicator flickers when control is activated by the keyboard. If not, replace Signal Distribution Unit.
2. Individual receiver/driver non-operative: Check green LED indicator on fuse bracket in Receiver/Driver box. This signifies that AC power is applied by the keyboard. If not, check shielded-twisted-pair cable between Signal Distribution Unit and Receiver/Driver box. Confirm camera address setting in Receiver/Driver corresponds to same camera number as selected by the keyboard. Perform internal Receiver/Driver local test to verify operation of Receiver/Driver circuitry and pan/tilt/zoom wiring.

3. AutoDome series dome cameras are not operating in a variable speed fashion: Verify CPU DIP switch 7 is selected for variable speed mode.

No Alarm Response

1. No system alarms operative: Verify power LED indicator on Alarm Interface Unit is lit. If not, check fuses on front of main CPU bay power supply. Verify the Alarm LED indicator lights and the audible buzzer sounds (if enabled) only when an 'alarm' is applied to the unit. If not, replace Alarm Interface Unit.
2. Individual cameras/monitors not responding when alarmed: Ensure desired cameras are properly armed on the appropriate armed monitors in the system. Verify alarming device and cable to Alarm Interface Unit intact.
3. Incorrect system alarm response: Verify that the desired alarm response mode has been selected. Refer to the section on Select User Functions for instructions.

CPU Software Version Numbers

During the evolution of the system, there have been various CPU software versions released. In certain troubleshooting cases, Factory Technical Support

personnel may ask for the version of the CPU. If it becomes necessary to obtain a CPU software version number, follow the steps below:

Newer CPU Versions:

1. Using a system keyboard, an operator with a level 1 priority can enter keyboard User Function 23. Press the User key. Enter 23 using the numeric keypad, then press the ENTER key.
2. The CPU version numbers will be displayed on the overlay of the monitor currently being controlled by the keyboard. Record number for future reference.

Old or New CPU Versions:

1. Remove front panel of main CPU bay by loosening the four corner fasteners.
2. Turn OFF main AC power switch on power supply.
3. CPU module is located next to the power supply. Pull out CPU module from card cage until two IC's containing white labels are visible. The white labels contain copyright information and software version numbers. Record all numbers from label for future reference.
4. Re-install CPU module, and switch ON main AC power.
5. Re-attach front panel.

GLOSSARY OF TERMS

AUXILIARY - An auxiliary is an additional function of the remote receiver/driver which permits on/off control of outputs available to the user. In the Allegiant system, there are four relay outputs available which can be configured for contact closures, 24 VAC output, or LINE voltage output. They can also be set to activate either momentarily or in a latching mode.

BOOTSCREEN - A unique feature of the Allegiant system wherein a section of nonvolatile memory can be used to store specialized factory programming. A program of this type could then provide custom features which ordinarily would not be obtainable.

DITHER - A receiver/driver feature which provides added protection to very low light level cameras by periodically panning a few degrees left and right automatically.

LOCKOUTS - The ability of a switcher/controller system to restrict access of operations to certain system functions or features. The Allegiant system has two modes of lockouts. The first mode is based on operator priority level. This allows a higher priority level operator to lockout lower level operators from either viewing or controlling specific cameras. The second mode involves Master Control Software setups which can:

1. Restrict operators/keyboards from viewing/accessing any camera.
2. Restrict operators/keyboards from controlling/accessing any pan/tilt.
3. Restrict operators from using certain keyboards,
4. Restrict operators/keyboards from accessing certain monitors.

LOG-ON, LOG-OFF - A selectable feature of the Allegiant system which requires operators to enter a User number and an optional password into the keyboard prior to having access to system operations.

MATRIX SWITCHING - The ability of a switching system to display any camera on any monitor or the same camera on all monitors.

PHASED CAMERAS - Properly integrated cameras which give a roll-free video display when switching from one camera to the next in a sequential switcher system. Phased cameras are the result of line-locked cameras being powered from the same AC power, externally synchronized, or vertically phased adjusted on cameras equipped with this option.

PRE-POSITION - The ability to store the position of a pan/tilt and zoom lens so that the same desired scene can be later recalled automatically. With the Allegiant system, there can be multiple preset scenes stored for each pan/tilt camera. For each scene, the pan, tilt, zoom, and focus settings are stored.

SalvoSwitching - The ability of the Allegiant system to switch multiple video monitors as a synchronized group. Since multiple monitors switch together, the operator can view multiple scenes of a specific area or zone before switching to the next area.

SEQUENCE - A series of camera scenes that can be preprogrammed to automatically switch. The Allegiant system can store up to 60 separate sequences, with each one capable of having a random camera order, individual camera dwell times, and SalvoSwitching steps.

TIME EVENT - An Allegiant system feature (available with the optional TC8850 Graphical User Interface software or the optional TC8x59 Master Control Software) that enables various system functions to be periodically activated automatically. Event functions such as monitor message broadcasts, sequence and switching operations, receiver/driver actions, message printing, alarm settings, and execution of custom factory programming can be stored in the system memory to be executed at a pre-determined time. The task can be specified to begin on a specific year, month, day, and time, and can be programmed to repeat at intervals ranging from every five minutes up to a year.

VERTICAL INTERVAL SWITCHING - Vertical Interval switching is a method of switching video from camera to camera during the vertical blanking interval period of the video signal. This minimizes visual switching disturbances such as rolling, jitter, video flashes, etc. and eliminates frame information loss when used with video tape machines.

VersAlarm - A flexible system of configuring alarms using the optional TC8850 Graphical User Interface software or the optional TC8x59 Master Control Software. Multiple groups of monitors can be programmed to respond to alarm conditions in various ways. In addition, each alarm may call up from 1 to 4 cameras with user-selectable remote operations. Alarm video may also be programmed to display user-defined alarm titles on the monitor overlay display rather than the usual camera titles.

APPENDIX A

Satellite Systems

A satellite system configuration is usually used for a large distributed type of system. It may also be used to obtain extremely large matrix sizes configured in a more conventional manner. Typically, a single Main control site can be used to view/control cameras located both locally and at various remote satellite sites. Since many remote satellite sites can be linked to a single Main control site, very large, distributed types of systems can be achieved. If the satellite systems are located at the same site as the Main system, the result is a large conventional type system. In a satellite configuration, the Main control site can view/control any camera in the entire system but the remote satellite sites only have the ability to view/control cameras associated with their own site. The satellites may be configured to operate either in an independent manner or, if desired, have no local viewing/control capability at all.

The Main site must consist of any Allegiant series switcher (TC8300, TC8500, TC8600, TC8700, TC8800, or LTC 8900). satellite site switchers can be any Allegiant model, a TC8112B switcher, or a TC8124B switcher. A TC8780 Data converter unit is required at each satellite site to perform the address decoding and data conversion for the switching system. If the satellite site contains pan/tilt/zoom cameras, a TC8569-2 Code Merger unit is also required at the satellite site. All products are standard models and the only required software option is to include the appropriate Master Control Software package (TC8x59) or the TC8850 Graphical User Interface software package for initial programming of each Allegiant system.

Each satellite site must be provided with an Allegiant control data line coming from the TC8568 at the Main site. This data line carries all pan/tilt/zoom control commands in addition to the switching commands generated by the Main site switcher. The control data line should be connected to a TC8780 Data Converter unit which will be used to provide the address decoding functions for the satellite site. If operators will be stationed at the satellite site and are permitted to control pan/tilt/zoom equipped cameras, a TC8569-2 Series Code Merger unit must be installed at the satellite site. The Code Merger will combine the code generated by the main site and the satellite site so both sites have control over pan/tilt/zoom equipped cameras located at the satellite site. The TC8780 can then be connected to one of the data outputs of the TC8569-2 Series unit.

One or more monitor outputs from each satellite system are used as 'Trunk' lines to link the remote sites to the Main site. The number of trunk lines coming from a satellite site determines the maximum number of different cameras from that site that may

be viewed simultaneously at the Main site. A SatelliteSwitcher can provide only as many trunk lines as it has monitor outputs.

Each remote satellite switcher would be designed and installed in the usual way except that sufficient monitor outputs for use as Trunk lines must be included. The main site switcher is also designed and installed in the usual way except that camera inputs sufficient for both local cameras plus Trunk lines must be included. Obviously, the maximum physical number of camera inputs or monitor outputs being used as Trunk lines cannot exceed the capacity of the system involved. A TC8300 Main site switcher can receive up to 32 Trunk lines. A TC8500 Main site switcher can receive up to 64 Trunk lines. A TC8600 Main site switcher can receive up to 128 Trunk lines. TC8700 and TC8800 switchers can receive up to 256 Trunk lines. A LTC 8900 Main site switcher can receive up to 4096 Trunk lines.

A single Main site switcher can control multiple satellite sites. A TC8300 Main site can control up to 32 remote sites. A TC8500 Main site can control up to 64 remote sites. A TC8600 Main site can control up to 128 remote sites. TC8700, TC8800 and LTC 8900 Main sites can control up to 256 remote sites. If full matrix switching is required at the Main site, the number of Trunk lines from each satellite site must equal the number of monitors connected to the Main site switcher. Multiple, independently controlled Main site systems can be combined to provide large numbers of monitor outputs at the Main site. The various system capacities are listed in the table below for your reference:

System Type	Max. Camera Inputs	Max. Monitor Outputs	Max. No. of Satellite Sites
TC8112B	12	2	Not Applicable
TC8124B	24	4	Not Applicable
TC8300	32	6	32
TC8500	64	8	64
TC8600	128	16	64
TC8700	368	32	64
TC8800	256	64	256
LTC 8900	4096	512	256

Since the Allegiant series switchers can act as Main site switchers, they provide additional 'logical' camera numbers used for identifying the location of the various satellite camera inputs in the system. If desired, these 'logical' camera numbers can also be used to provide titles which would appear on the Main site's monitors for any of the various remote cameras. Since each camera anywhere in the system must have its own unique camera number,

the 'logical' camera numbers together with the 'physical' camera inputs make up the total system 'camera' capacity. In practice, there is also a trade off between the total number of Main site cameras and the number of inputs which are used as Trunk lines. The more inputs used as Trunk lines, the less there are available for use as direct camera inputs. In any case, the maximum number of system cameras (camera inputs at all sites plus Trunk lines) for the TC8300 is 160. The maximum number for the TC8500 is 320. The maximum number for the TC8600 is 1152. The maximum for TC8700 and TC8800 systems is 2304. The maximum number for the LTC 8900 is 4608.

The Main site system must be programmed using the optional TC8x59 Master Control Software package or the TC8850 Graphical User Interface software package to identify camera trunk line inputs as well as remote satellite cameras. All systems must be configured so that there are no duplicate camera numbers anywhere in the system. Allegiant systems must be configured with either the optional TC8x59 Master Control Software package or the optional TC8850 Graphical User Interface software package; see the appropriate installation manual for configuring TC8112B and TC8124B switchers.

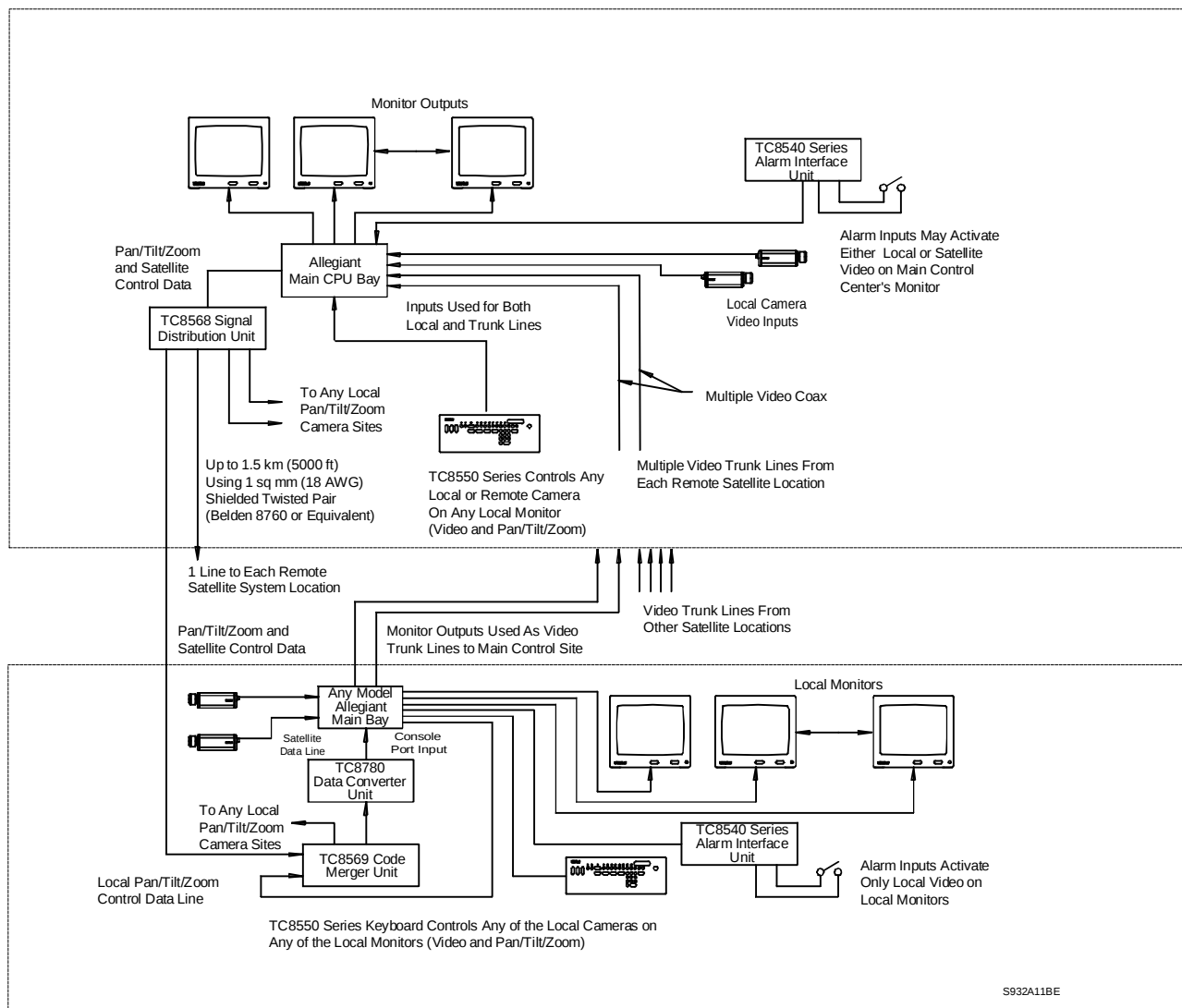
NOTE: TC8112B AND TC8124B SERIES SWITCHERS CAN ONLY ACCEPT 2 DIGIT CAMERA NUMBERS. THESE SWITCHERS CAN NOT BE USED IN SITES WHERE THE CAMERA NUMBERS WOULD EXCEED 99. THE STARTING CAMERA NUMBER SHOULD NOT BE CHANGED IN TC8112B/TC8124B SITES WHERE LOCAL

PAN/TILT/ZOOM EQUIPPED CAMERAS WILL BE USED SINCE THE TC8135B CONTROLLER FOLLOWER CAN ONLY ADDRESS NUMBERS FROM 1 TO 24.

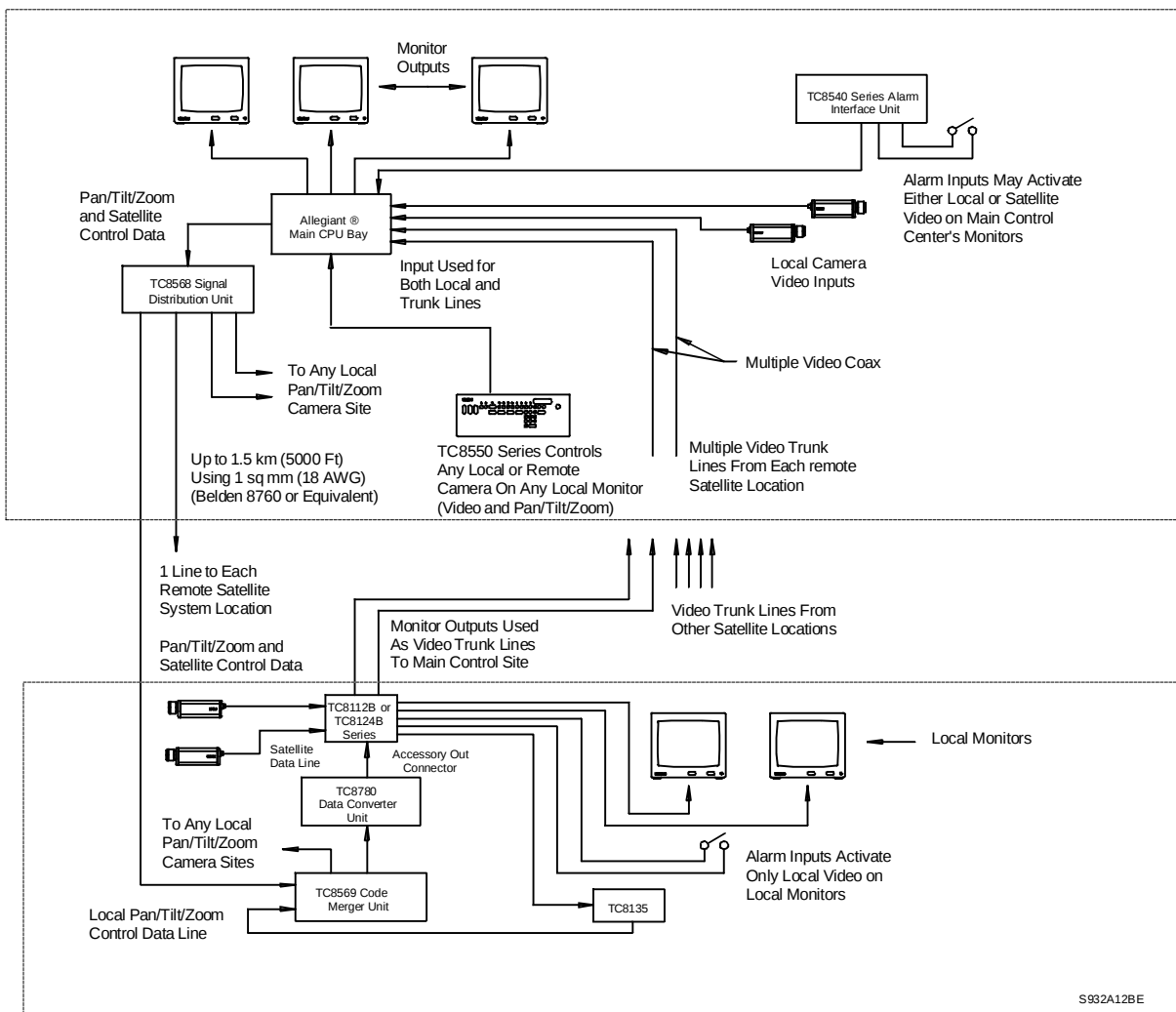
Any alarm inputs to the main site which have been programmed to activate cameras located at satellites will operate in the 'normal' way except when limited by the number of Trunk lines available. The software will automatically determine Trunk usage depending upon the priority level of operators currently viewing satellite cameras. Note that alarm inputs applied at a satellite site will NOT activate alarm video at the Main site. If the application requires alarms located at a satellite to activate video at the Main site, then the Main site's TC8540C Alarm Interface unit must be remotely located. Up to 16 TC8540C Alarm Interfaces may be remoted using a TC8713A Alarm Port expander accessory unit located at the Main switcher site in TC8800 and LTC 8900 systems. Up to 8 TC8540C Alarm Interfaces with a TC8713A Alarm Port expander can be used in a TC8600 system. Two TC8540C can be used in TC8500 systems. Since the TC8300 contains an integral alarm interface, the remote alarm interface application would not apply with this model.

A unique time and date synchronizing feature provided in the Time Event table of the Master Control Software package may be programmed into the main site switcher. This permits periodic synchronizing of the time and date to all switchers in the system based on the main site's clock.

A conceptual diagram of a satellite switching system is included in this manual for your reference.



Conceptual Diagram of Allegiant Satellite Switching System



Conceptual Diagram of Allegiant Satellite Switching System

APPENDIX B

Sample Keyboard Operating Instructions

(The information below can be used for reference and as a training aid.)

1. **MANUAL CAMERA SWITCHING**
(To view another camera)

Select the camera number you wish to view using the numeric keypad and press the **ENTER** key. The selected camera will then appear on the monitor.

2. **SWITCHING CONTROL TO ANOTHER MONITOR (To change to a different monitor on which cameras may be viewed/controlled)**

Press the **MONITOR** key, then select the monitor number you wish to control using the numeric keypad. Then press the **ENTER** key. The keyboard display will now indicate the selected monitor number and the camera currently displayed on that monitor.

3. **LOCKING/UNLOCKING A RECEIVER/DRIVER (Restricts other operators from controlling the selected pan/tilt/zoom camera)**

Press the **LOCK** key, then press the **ON** key (or **OFF** key to unlock the camera). Note the status area of the monitor overlay display between the camera number and the time. This area will now show a "R_L" indicating the camera is locked. This will prevent other operators (unless they have a higher priority) from controlling the pan/tilt/zoom camera currently being viewed. Remember to unlock the camera before moving on to the next step.

4. **LOCKING/UNLOCKING A MONITOR (Restricts other operators from switching video on the desired monitor)**

Press the **MONITOR** key, press the **LOCK** key, then press the **ON** key (or the **OFF** key to unlock the monitor). The status display of the monitor overlay will now show a "M_L" indicating the monitor is locked. This will prevent other operators (unless they have a higher priority) from changing the video on the monitor being used. Remember to unlock the monitor before moving on to the next step.

5. **PROGRAMMING A PRE-POSITION CAMERA SCENE**

(Stores the current position of a properly equipped pan/tilt/zoom camera for later automatic recall)

Select a camera having pan/tilt/zoom control (with pre-position options) as described above. Using the joystick and lens controls, adjust the camera to view the scene you wish to store. Press the **SET** key, then select the scene number using the numeric keypad and press **ENTER**. The camera position will now be stored in memory.

6. **RECALLING A PREVIOUSLY STORED PRE-POSITION CAMERA SCENE (To recall the pan/tilt/zoom camera position stored in the previous step)**

Select the camera to be activated. Press the **SHOT** key, then select a previously stored camera position number using the numeric keypad. Press **ENTER**. The camera will automatically return to the previously stored position.

7. **LOGGING-OFF TO SECURE SYSTEM (To prevent unauthorized access to system operations)**

If this system feature has been enabled, operators may secure access to the system by pressing the **USER** key, then the **OFF** key. The operator will then be logged-off the system and the keyboard will no longer respond to commands.

8. **LOGGING-ON TO THE SYSTEM (To regain access to the system)**

If the keyboard indicates a logged-off state (**USER** and **OFF** indicators are lit), an operator may log-on by pressing the **ON** key, a user number (1 to 32), the **ENTER** key, the correct password number (the default is the same as the user number), and **ENTER** again. The keyboard display will now indicate an active monitor and camera number.

9. PROGRAMMING A SIMPLE CAMERA SEQUENCE

To program a sequence of cameras 1 through 5 having a 2 second dwell rate on the monitor currently being used, enter the following commands:

- A. To enter the programming mode, press **PROGRAM**, the desired sequence number (1 to 60), then **ENTER**. The monitor display will change to the following format:

1ST LINE = SEQUENCE # SEQUENCE LENGTH

2ND LINE = >CAMERA #< MONITOR # DWELL

Note the "> <" prompts around the camera number. You may now enter the 1st camera of the sequence into this position. If it is correct, no action is necessary. If not, enter the desired camera number using the keypad, then **ENTER**. Using the joystick control, move **RIGHT** one step. The prompts now are around the monitor number. Verify that the number indicated is the monitor number being programmed. If not, enter the desired number using the keypad, then press **ENTER**. Move **RIGHT** again and verify that the number 2 is shown. If not, enter 2 (for a 2 second dwell) using the keypad, then press **ENTER**. One line is now complete.

Press the **NEXT** key to add a second line. The camera number automatically increments while the monitor number and dwell remain the same as the first line. Since this line is correct, no change is necessary and **NEXT** may be pressed 3 more times until line 5 is reached.

In a spreadsheet format, the sequence appears like this:

<u>CAMERA</u>	<u>MONITOR</u>	<u>DWELL</u>
1	(MONITOR # HERE)	2
2	(MONITOR # HERE)	2
3	(MONITOR # HERE)	2
4	(MONITOR # HERE)	2
5	(MONITOR # HERE)	2

Note that the joystick can be used to move around within the spreadsheet, but only the **NEXT** key can add new lines.

- B. At this point, pressing the **RUN/EXECUTE** key will exit the programming mode, store the sequence into memory and start the sequence running.

10. CONTROLLING SEQUENCES (Automatic video switching control)

Sequences can be run automatically or incremented step by step in both the forward and reverse direction. Pressing **NEXT** momentarily when the sequence is stopped will switch to the next camera. Holding **NEXT** down will quickly scan through the sequence. **PREVIOUS** is similar to **HOLD**, but is used to make the sequence switch in the backward direction. **RUN** starts a sequence switching automatically. When a sequence is running, **PREVIOUS** and **NEXT** can be used to alter its direction. Press **HOLD** to stop any ongoing sequence. Note that the sequence direction (forward or reverse) and state (running or stopped) is indicated in the status display of the monitor overlay at the right side of the sequence number.

11. PROGRAMMING A SalvoSwitching CAMERA SEQUENCE (Automatic switching of multiple monitors as a group)

Enter the programming mode as described above in step 9 for a simple camera sequence. Since a salvo sequence involves multiple monitors switching as a group, the programming must involve more than 1 monitor. A simple salvo sequence which switches cameras on two monitors at the same time is show below in the spreadsheet format:

<u>CAMERA</u>	<u>MONITOR</u>	<u>DWELL</u>
1	(1st MONITOR # HERE)	SLV
2	(2nd MONITOR # HERE)	2
3	(1st MONITOR # HERE)	SLV
4	(2nd MONITOR # HERE)	2
5	(1st MONITOR # HERE)	SLV
6	(2nd MONITOR # HERE)	2

Follow the instructions used above for the simple camera sequence previously programmed, but remember to use a different sequence number for this salvo sequence. Note that to enter the dwell for a salvo step, key in **61** and press **ENTER**.

12. KEYBOARD USER FUNCTIONS

(Programming feature for system setups which do not require changing on a daily basis)

The Keyboard User Functions are listed below. Note that certain functions can only be changed by the operator with a level 1 priority. A user function example is shown after the listing of the table.

As an example, select a monitor to position the overlay display on by using User Function #4. To enter the User Function mode, press **USER**, the number **4**, then press **ENTER**. Now use the joystick to position the monitor overlay display to the desired area of the monitor. When finished, press **ENTER** to store the position, then press **USER** to exit the User Function mode.

For procedures on using the other User Functions, refer to the appropriate section of the operating manual.

FN No.	FUNCTION DESCRIPTION	ACCESS LEVEL
1.	LOCAL KEYBOARD TEST	Any
2.	SHOW KEYBOARD NUMBER	Any
3.	BEEPER ON/OFF	Any
4.	POSITION MONITOR DISPLAY	1,7
5.	DISPLAY BRIGHTNESS	1,7
6.	DISPLAY ON/OFF	1,7
7.	SET TIME	1,7
8.	SET DATE	1,7
9.	SET CAMERA TITLE	1
10.	CHANGE PASSWORD	Any*
11.	SET TIME/DATE FORMAT	1
12.	DEFAULT MONITOR DISPLAYS	1
13.	CONFIGURATION TABLE PRINTOUT	1
14.	NOT USED	1
15.	SYSTEM RESET	1*
16.	ENABLE TIMED EVENTS	1
17.	SET MONITOR TITLE	1
18.	SEQUENCE PRINTOUT	1
19.	ALARM RESPONSE SELECTION	1*
20.	SELECT PRINTING MODE	1
21.	DESIGNATE MONITOR TYPE	1*
22.	SELECT AutoDome SPEED TYPE	1*
23.	DISPLAY CPU VERSION NUMBER	Any
24.	ALL MONITOR DISPLAY POSITION	1,7
25.	ALL MONITOR DISPLAY BRIGHTNESS	1,7
26.	ALL MONITOR DISPLAY ON/OFF	1,7
27.	SELECT KEYBOARD LOG-IN	1
28.	SELECT CONSOLE LOG-IN	1
29.	RESET RS-232 PARAMETERS	1
30.	SELECT CONSOLE RS-232 PARAMETERS	1
31.	SELECT PRINTER RS-232 PARAMETERS	1
32.	SELECT ALARM RS-232 PARAMETERS	1
33.	DISPLAY USER NUMBER AND PRIORITY	Any

* Indicates Password required

APPENDIX C

Installation Checklists

(A simplified guide for those who are already familiar with installing and programming Allegiant systems.)

MAIN BAY HARDWARE INSTALLATION

Unpack equipment and verify that items have been received without carrier damage.

Install power supply (do not turn ON) and CPU module.

If applicable, install bay into EIA 19-inch rack (remember to remove rubber bumper foot pads).

Install video input module(s) following proper termination procedures. Install video output module(s).

Connect camera inputs and monitor outputs to appropriate connections on equipment bay(s).

Connect system keyboards, any alarm interface unit(s), and any signal distribution unit to main bay.

Set CPU DIP switches to activate desired features.

Apply main AC power to equipment.

Verify system is operating properly then begin appropriate programming.

PROGRAMMING VIA SYSTEM KEYBOARD

Enter system time (User Function 7) and date (User Function 8). Enter Camera ID titles (User Function 9), and if desired, adjust monitor overlay displays (User Function 4, 5, & 6 or 24, 25 & 26).

Enter desired Sequences.

Configure and test alarm response mode.

SATELLITE CONFIGURATION HARDWARE INSTALLATION

Main Site:

Install main Allegiant bay and appropriate accessory products accordingly. Verify biphase control code line is run to each satellite site.

Attach Trunk line inputs, local camera inputs, and monitor outputs to main Allegiant bay. Apply main AC power to equipment.

Program Camera ID table using optional TC8850 Graphical User Interface software or optional TC8x59 Master Control Software package.

Switch all unused monitor outputs located at main site to display a 'local' camera input.

Satellite Site(s):

Install satellite switcher and appropriate accessory products accordingly.

Connect biphase code line to TC8780 Data Converter unit and configure according to desired satellite address and switcher's baud rate.

If necessary, program satellite switcher for desired camera titles and any other related requirements.

APPENDIX D

Quick Reference Cable Interconnections

Main Bay Video

COAX -- All video input and output connections to the Allegiant system should be made using a good grade of RG59U, RG6, or RG11U coaxial cable using BNC connectors. The following guidelines should be used to insure selection of the proper cable type:

1. Center conductor of copper, not copper weld or steel. Use stranded wire where there will be cable movement as with pan/tilts, elevators, etc.
2. Copper braided shield at 93% coverage or better.
3. Cable impedance of 75 ohm.
4. Select cable based on target of no more than 15 ohms of center conductor resistance. A typical value for RG59U is 15 ohms per 1000 feet, therefore maximum cable run should be no more than 1000 feet. RG11U/RG6 is typically rated for 6 ohms per 1000 feet which permits runs up to 2500 feet.
5. Use video amplifiers to extend cable distances beyond maximum limitations listed above.

Keyboards

- A. The keyboard comes supplied with 10 feet of 6 conductor phone type cable with RJ-11 connectors. The cable plugs directly into the rear of the system's main bay on one end and into the back of the keyboard on the other end. Both data and power for the keyboard travel over this cable.
- B. An optional 100 foot cable is also available.
- C. An optional kit which permits the keyboard to be extended beyond 100 feet is available and uses customer supplied shielded twisted pair. The kit consists of two "breakout" boxes which convert from the phone type cables to the shielded twisted pair and also provide for local keyboard power. Maximum distance using 24 gauge wire (Belden 9841 or equivalent) is typically 5000 feet.

Alarm Interface Unit

CONNECTION TO MAIN BAY -- The Alarm unit is supplied with a 10 foot multiconductor cable with 9-pin D-type connectors. Power to the Alarm unit is provided by the Allegiant's main bay using the supplied cable. There are provisions to remote the bay which would then require local 12 VAC power and a minimal 3 wire RS-232 communication link.

ALARM INPUTS -- The alarm inputs can be dry contact closures or logic levels. Connection to the Alarm unit is made to removable screw type terminal blocks and the use of simple twisted pair wire is acceptable.

Signal Distribution Unit

CONNECTION TO MAIN BAY -- The Distribution unit is supplied with a 10 foot multiconductor cable with 9-pin D-type connectors. Power to the unit is provided by the Allegiant's main bay using the supplied cable. The cable should not be extended so it is recommended that the unit be located close to the main bay.

DISTRIBUTION OUTPUTS -- Only shielded twisted pair wire should be used between the Distribution unit and the camera site receiver/drivers. Connection to the Distribution unit is made to removable screw terminal type blocks. Each output is rated to handle up to 8 receiver/driver loads as in a daisy chain configuration to a maximum of 5000 feet using a 18 gauge wire (Belden 8760 or equivalent).

Receiver/Drivers

CODE INPUT -- The code input is supplied by the shielded twisted pair cable from the Signal Distribution Unit. This is connected to a removable screw terminal type block which has provisions for "looping" the code cable to another receiver/driver.

OUTPUT CONNECTIONS -- All pan/tilt and lens connections will require multiconductor cable. Refer to the appropriate specification sheet for cable gage, number of conductors required, and maximum distances allowable. The lens cables and any pre-position cables should be kept shielded from other signal wires to minimize interference.

APPENDIX E

Main Bay Rear Panel Connector Pinouts

Console Port RS-232 Pinouts

Pin #	Designation
1	CHASSIS GND
2	Rx
3	Tx
4	CTS
5	RTS
6	NO CONNECTION
7	DATA GND
8	NO CONNECTION
9	NO CONNECTION

Alarm Port RS-232 Pinouts

Pin #	Designation
1	RTS
2	Tx
3	CHASSIS GND
4	DATA GND
5	DATA GND
6	Rx
7	CTS
8	12 VAC
9	12 VAC

Keyboard RS-485 Ports

Pin #	Designation
1	12 VAC
2	GND
3	-DATA
4	+DATA
5	GND
6	12 VAC

Printer Port RS-232 Pinouts

Pin #	Designation
1	CHASSIS GND
2	Rx
3	Tx
4	CTS
5	RTS
6	NO CONNECTION
7	DATA GND
8	NO CONNECTION
9	NO CONNECTION

Code Port Pinouts

Pin #	Designation
1	+DATA
2	-DATA
3	GND
4	GND
5	GND
6	NO CONNECTION
7	NO CONNECTION
8	12 VAC
9	12 VAC

COMM PORT 1 And COMM PORT 2

(Not Applicable To All Systems)

Pin #	Designation
1	CHASSIS GND
2	+TXD
3	-TXD
4	+RXD
5	-RXD
6	GND
7	GND
8	GND
9	GND

For reference, a cable (part number 303 0753 003) to connect the Allegiant's CONSOLE port to an external PC would use the following pinouts:

9-Pin Male (CONSOLE)	Allegiant Designation	9-Pin Female (PC Side)
1	Chassis GND	None
2	Receive Data	3
3	Transmit Data	2
4	CTS	1
5	RTS	8
6	No Connection	None
7	Data GND	5
8	No connection	None
9	No connection	None
		(pins 4 & 6 jumpered)
		(pins 1 & 7 jumpered)

For reference, a cable (part number 303 0753 002) to connect the Allegiant's PRINTER port to an external serial printer would use the following pinouts:

9-Pin Male (PRINTER)	Allegiant Designation	25-Pin Male (Printer Side)
1	Chassis GND	1
2	Receive Data	2
3	Transmit Data	3
4	CTS	4,8
5	RTS	5
6	No Connection	None
7	Data GND	7
8	No connection	None
9	No connection	None
		(pins 6 & 20 jumpered)

APPENDIX F

AutoDome Series Camera Commands

Auxiliary Controls

R/D COMMANDS:

<u>R/D Function</u>	<u>Aux. #</u>	<u>Description</u>	<u>On/Off</u>	<u>Notes</u>
Scan	1	autopan without limits	on/off	5
Auto-Pan	2	autopan between limits	on/off	
Pre-Position Tour	8		on/off	
Auto Return Home	9	Return to PP#1 upon inactivity	on/off	2,10
Set auto-pan speed	14		inc/dec	2,10
Set tour period	15	Sets pause between tour callups	inc/dec	2,10
Pan AutoSpeed	16	Enables/Disables Pan Autospeed	on/off	2,10
Auto-Pivot Enable	18	Enables/Disables Auto-Pivot	on/off	2,10
Playback, continuous	50		on/off	
Playback, single	51		on/off	
Resume playback	52		on/---	
Record	100		on/off	10
Resume record	101		on/off	10

LENS COMMANDS:

<u>Lens Function</u>	<u>Aux. #</u>	<u>Description</u>	<u>On/Off</u>	<u>Notes</u>
Iris Control	3		auto/manual	1
Focus Control	4		auto/manual	1
Auto-iris ALC adj.	10		peak/ave	1,10
Auto-iris Level adj.	11		inc/dec	1,10
Auto-focus Activation	12	Activates AF upon movement	on/off	2
Spot Focus	17	Activates Spot Auto-Focus	on/off	2,10
Auto-iris Activation	13	Activates AI upon movement	on/off	2
Zoom Ratio	19	Limits zoom for tele-cvrtr. models	limited/full	2

CAMERA COMMANDS:

<u>Camera Function</u>	<u>Aux. #</u>	<u>Description</u>	<u>On/Off</u>	<u>Notes</u>
BL_COMP	20	Backlight Compensation	on/off	1
HIGH_LIGHT	21	High-light	on/off	1
SHUTTER_ADJ	22	Shutter Adj.	inc/dec	1,10
SHUTTER	23	Shutter	on/off	1,10
AUTO-SHUTTER	24	Auto shutter activation	on/off	2,10
WHITE_BALANCE	30	White Balance	auto/manual	
RED	31	Red Adj.	inc/dec	1,10
BLUE	32	Blue Adj.	inc/dec	1,10
R_Y_HUE	33	R-Y Hue Adj.	inc/dec	3,10
B_Y_HUE	34	B-Y Hue Adj.	inc/dec	3,10
FIXED_WB	35	Fixed White Balance	indoor/outdoor	1,10
FACTORY_DEFAULTS	40	Factory Default Settings	set/---	1,3,10
LL_PHASE	41	Adj LL Phase Delay	inc/dec	3,10
SYNC	42	Sync Mode	ll/xtal	3,10
AGC	43	AGC	on/off	3

Note: Auto-Pan is discontinued when the manual pan control (joystick) is used.

Auto-Iris and Auto-Focus revert to manual mode when the manual iris and focus controls are used, respectively.

Switching to manual- ris or manual focus from auto mode reverts to the last manual setting used.

Auto-Focus/Iris is activated automatically upon pan or tilt when Auto-focus/iris Activation is on.

Manual-Iris is activated automatically upon Activating (ON) Back-Light Compensation.

Pre-Position Controls

<u>R/D Function</u>	<u>Pre-Position #</u>	<u>Description</u>	<u>Set/Shot</u>	<u>Notes</u>
Pre-position	1-99		set/show	4,11
Auto-pan left limit	101		set/show	2,11
Auto-pan right limit	102		set/show	2,11
Command lock mode activate	103		set/---	10,11
Command lock mode deactivate	104		set/---	10,11
Home Position	110		recalibrate/show	11
Move Pan position 180°	111, 180		---/show	10
Erase record to end	500	erase playback to end	set/----	11
Reset to factory defaults	899		set/---	9,11
Global Disable/Enable PP	900		disable/enable	10,11
Disable/Enable PP	901-999		disable/enable	6,10,11

NOTES

1. This setting stored with pre-position.
2. This setting stored as a default setting in non-volatile memory (EEPROM) on R/D board and is used to restore settings at power-up.
Default settings:
Autopan left limit = 0 degrees
Autopan right limit = 359.9 degrees
Autopan speed = 30 degrees per second
Auto-focus Activation = ON
Auto-iris Activation = ON
AutoSpeed = OFF
Spot auto-focus = OFF
Command Lock = OFF
Auto-shutter = OFF
Auto-Pivot Enabled (OFF)
Zoom Range Limit = OFF
Return Home = OFF
3. This setting stored as a default setting in non-volatile memory in camera.
4. Pre-position #1 (if set) is automatically called-up upon power-up just after the homing sequence.
5. Scan direction determined by last manual pan direction.
6. Pre-positions can be disabled such that they do not operate during an automatic call-up (tour). They are still available for manual call-up.
9. This command clears all pre-positions, resets the EEPROMs to factory defaults, and resets the lens and camera to defaults.
10. Access to certain AutoDome commands can be restricted when using an Allegiant switching system. Allegiant system operators with Priority levels 1 through 7 can activate the 'command lock' mode by 'setting' preposition 103. Once the lock mode is activated, Allegiant system operators with priority level 8 would not be able to change functions indicated by note 10. The higher priority operators (1-7) can deactivate the 'command lock' mode by 'setting' preposition 104.
11. Allegiant operators with priority level 8 are not permitted to 'set' preposition functions.

