

CHAPTER 8: THE CYGNUS 8PC MANUAL CONTROL UNIT



INTRODUCTION

The *Cygnus 8PC Manual Control Unit* adds manual and automation override capability to the *Universal Theater Control System (UTCS)*.

The *Cygnus 8PC* has eight control clusters that can be programmed by **ECCS** to add manual control for any device attached to the **UTCS**.

The *Cygnus 8PC* is connected to the **UTCS** communication network and intercepts and evaluates each command issued from *Hercules Central Processor*. Depending upon the situation, one of the following will occur:

1. If the target device for a received command has no associated manual control on any of the *Cygnus 8PC* control clusters, the command is reissued from the *Cygnus 8PC* to the communication network.
2. If the target device has an associated manual control, but it is set for automation, the command is re-issued from *Cygnus 8PC* to the communication network.
3. If the target device has an associated manual control, and it is set to manual, the command is terminated and a 'DEVICE IN MANUAL MODE' message is sent to the *Hercules Central Processor*. This allows a device, or devices, to be removed from a programmed *Show Segment*.

Turning the *Cygnus 8PC* off will remove its manual control panels from the communication network and restore a direct connection between *Hercules Central Processor* and the rest of the **UTCS**.

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CYGNUS 8PC FRONT PANEL CONTROLS

The front panel of the *Cygnus 8PC* contains eight control clusters. Each control cluster possesses the following components.

1. The rectangular <AUTO/MAN> button located at the top of the cluster. When pressed, the control cluster toggles between automatic and manual control.

If the button is brightly lit, it indicates the control cluster is in **MANUAL MODE**. Turning the knob and/ or pressing the other cluster buttons will operate the device connected to the cluster. Any computer commands issued to the target device will be intercepted by the *Cygnus 8PC*, and a 'DEVICE IN MANUAL MODE' message will be sent back to *Hercules*.

If the button is dim, it indicates the control cluster is in **AUTO MODE**. Turning the knob and/ or pressing the other cluster buttons will be ignored. Commands issued from computer will through to the associated device.

2. The two round buttons labeled <FWD> and <REV> can be set up to advance and reverse a projector slide tray when the slide projector is under manual control. Alternatively, these buttons can be programmed by **ECCS** to control any device attached to the **UTCS**.
3. The knob controls the lamp level of the target device when the control cluster is in **MANUAL MODE**.

CUSTOMIZING THE CYGNUS 8PC FRONT PANEL CONTROLS

Before the control clusters can be customized by **ECCS** to control any device attached to the **UTCS**, the following information must be determined for each control cluster.

1. The **Device Type** as defined in the *Configuration File* of the device to be controlled.
2. The type of *Intelligent Controller* the device is attached to.
3. The **Unit Number** of the *Intelligent Controller* the device is attached to.
4. The **Slot Number** of the *Intelligent Controller* the device is attached to.

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CYGNUS REAR PANEL CONNECTIONS

The *Cygnus 8PC* has two wedge-shaped, nine pin (**DB9**) connectors on the rear panel. All input and output connections are made here.

COMMUNICATION NETWORK CONNECTORS

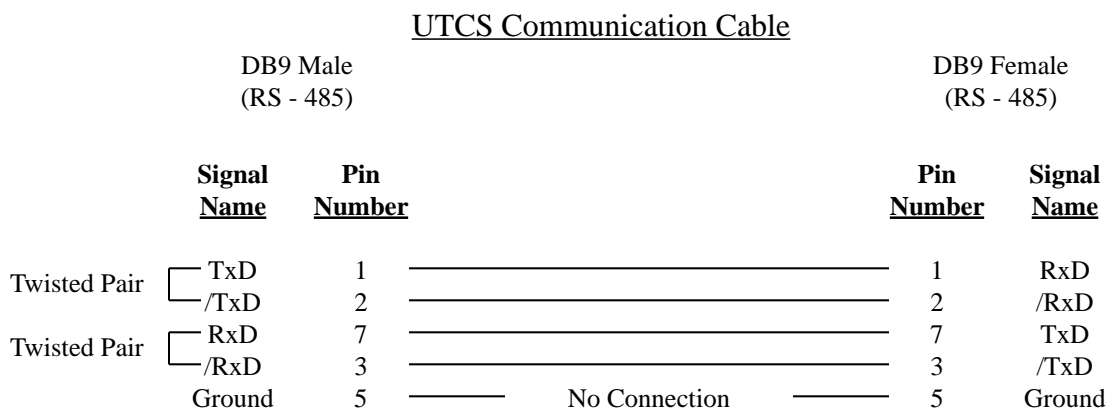
The communication network connectors are located on the *Cygnus 8PC* rear panel. There are two **DB9** connectors, a male and a female, labeled '**UTCS Communication**'. In a typical installation, the male connector will connect towards the *Hercules Central Processor*, and the female will connect towards the next *Intelligent Controller*.

The *Cygnus 8PC* will be the first *Intelligent Controller* connected to the *Hercules Central Processor*. The *Gemini General Purpose Controllers*, that control the slide projectors, and any other *Intelligent Controllers* used in the system, will need to be connected to the communication network after the *Cygnus 8PC*.

COMMUNICATION CABLE WIRING

All communications are four conductor cables with a male DB9 connector at one end and a female DB9 connector at the other.

Communication cables are wired straight through, with pin 1 on the male end tied to pin 1 on the female end, pin 2 to pin 2, pin 3 to pin 3, and pin 7 to pin 7. For optimal performance, the wires should be twisted pairs with one pair on pins 1 and 2 and the other on pins 3 and 7. The pin diagram is illustrated below.



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CYGNUS 8PC MONITORED COMMANDS

The following *Hercules* commands are monitored by *Cygnus 8PC* for related activity and relayed down the communications network:

Hercules Command	Command Name	Command Description
AUTODVC	Set Device Auto	This command can be directed at any device in the theater. The <i>Cygnus 8PC</i> will check to see if the device is defined in MANUAL MODE use with the buttons. If so, the <i>Cygnus 8PC</i> will set the associated panel control to AUTO MODE . This command is reissued to all <i>Intelligent Controllers</i> downstream.
MANDVC	Set Device Manual	This command can be directed at any device in the theater. The <i>Cygnus 8PC</i> will check to see if the device is defined in AUTO MODE use with the buttons. If so, the <i>Cygnus 8PC</i> will set the associated panel control to MANUAL MODE . This command is reissued to all <i>Intelligent Controllers</i> downstream.
AUTOSYS	Set System Auto	This command is global and affects every device in the system. The <i>Cygnus 8PC</i> will set all panel controls to AUTO MODE . This command is reissued to all <i>Intelligent Controllers</i> downstream.
MANSYS	Set System Manual	This command is global and affects every device in the system. The <i>Cygnus 8PC</i> will set all panel controls to MANUAL MODE . This command is reissued to all <i>Intelligent Controllers</i> downstream.
HOMESYS	Home All Devices	This command is global and affects every device in the system. The <i>Cygnus 8PC</i> will set all panel controls to AUTO MODE . This command is reissued to all <i>Intelligent Controllers</i> downstream.