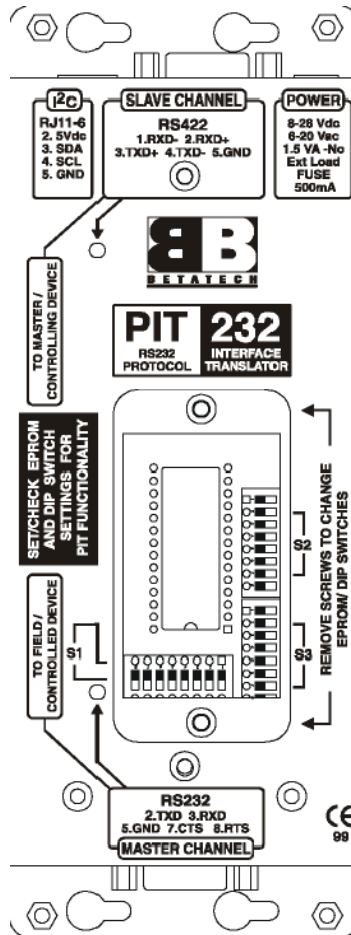


1.1 INTRODUCTION

This document describes the use of two RS422_RS32 Protocol Interface Translators (PIT) in order to extend the connection of intercom control keyboards. The interconnection between the PITs uses a standard RS232 communications channel. Data activity on the RS232 channel is kept to a minimum.



The PIT, which connects to the VideoBloX intercom CPU, simulates a keyboard. This PIT will be referred to as the Intercom CPU PIT. It receives LED control message packets on its RS422 slave port and converts these into single ASCII characters in the range 'A'..'X'. These characters are then transmitted out of the RS232 master port. ASCII characters in the range '0'..'7' received on the RS232 port simulate key presses on the intercom keyboard and are stored in a buffer. When the Intercom CPU reads the PIT, the corresponding key code is returned.

The PIT which connects to the remote keyboard polls the Intercom keyboard via it's RS422 Slave port. This PIT will be referred to as the keyboard PIT. When it detects any key press, these are converted into ASCII characters in the range '0'..'7' which are transmitted out of the RS232 master port. ASCII characters in the range 'A'..'X' received on the RS232 port are converted into LED control packets and sent to the keyboard.

2.1 CONNECTIONS

2.1.1 Intercom CPU PIT

The RS422 slave port of this PIT connects pin to pin to the Intercom CPU BossWare master port. Due to the master / slave connection, pin to pin connections are required.

Pin Number	Pin Function
1	RS422 Receive data [-] (from BossWare master RS422 Tx[-])
2	RS422 Receive data [+] (from BossWare master RS422 Tx[+])
3	RS422 Transmit data [+] (to BossWare master RS422 Rx[+])
4	RS422 Transmit data [-] (to BossWare master RS422 Rx[-])
5	RS422 Communications common
6	Power Supply +
7	N/C
8	N/C
9	Power Supply Common

The RS232 master port connects to the keyboard PIT RS232 master port. As both ports have “master” pin-outs, it is necessary to swap the TXD and RXD lines.

Pin Number	Pin Function
1	Internally connected to pins 4 and 6
2	TXD (data to slave device RXD)
3	RXD (data from slave device TXD)
4	Internally connected to pins 1 and 6
5	GND
6	Internally connected to pins 4 and 6
7	CTS (from slave device RTS)
8	RTS (to slave device CTS)
9	N/C

It is only necessary to connect pins 2,3 and 5 as follows:

Intercom CPU PIT Pin Number	Keyboard PIT Pin Number	Intercom CPU PIT Pin Function	Keyboard PIT Pin Function
2	3	TXD	RXD
3	2	RXD	TXD
5	5	GND	GND