Installation

The Impulse Automation option provides a serial interface for Impulse consoles. This interface enables the console to be controlled by a digital delivery system for automated or unattended operation.

Some of the control features available with Impulse Automation include:

Control Surface Automation
- -Channel On/Off
- -PGM Assigns
- -Off-line/Cue Assigns
- -A/B Source Select

Internal Console Automation
- -Fixed Fader to Unity
- -Panel Lockout

The actual features avaialble to each installation are determined by the digital delivery system connected to the Impulse Automation board.

Installation Precautions

Because this installation may involve changing several Gate Array chips, the console must be powered down during the installation process. It is strongly recommended that the installer take the necessary precautions to prevent discharging static electricity into any part of the console while performing this installation.

FIELD INSTALLATION KITS

The Field Installation Kit for Impulse Automation on a 12-channel console (99-1068-1) contains the following items:

Qty.	Part#	Description
1	99-1043	Automation Board
1	76-903	Connector Kit
12	21-214-3	Gate Arrays
1	90-1667	Wire Harness
2	38-144C	Rear Panel Screws
2	38-78B	Int Standoff Screws
1	70-130	Extraction Tool
1	71-1134	Manual

The Field Installation Kit for Impulse Automation on a 20-channel console (99-1068-2) contains the following items:

Qty.	Part#	Description
1	99-1043	Automation Board
1	76-903	Connector Kit
20	21-214-3	Gate Arrays
1	90-1667	Wire Harness
2	38-144C	Rear Panel Screws
2	38-78B	Int Standoff Screws
1	70-130	Extraction Tool
1	71-1134	Manual

SERIAL IMPULSE KIT

If the Impulse console has been purchased with the Automation option included, the console will arrive with the Serial Impulse Kit (99-1052) which includes the following items:

Qty.	Part#	Description
1	99-1043	Automation Board
1	76-903	Connector Kit

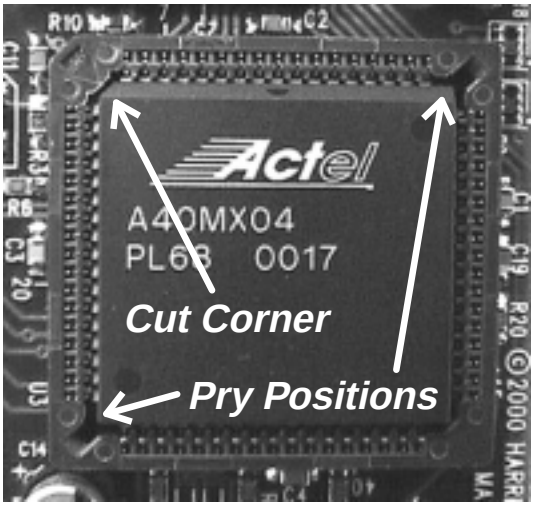
1	90-1667	Wire Harness
2	38-144C	Rear Panel Screws
1	71-1134	Manual

GATE ARRAY INSTALLATION

NOTE: Only Gate Arrays with the number 21-193-4 need to be changed.

Loosen the two captive Phillips screws at the top of the control surface and raise it to expose the motherboard assemblies within the console.

Locate the channel Gate Arrays in the center of the console. Using the Extraction Tool, remove the channel Gate Array chips from the assembly. There will be 12 Gate Array chips in a 12-channel console and 20 Gate Array chips in a 20-channel console. Replace each chip with IC 21-214-3 making sure the chip is properly seated.



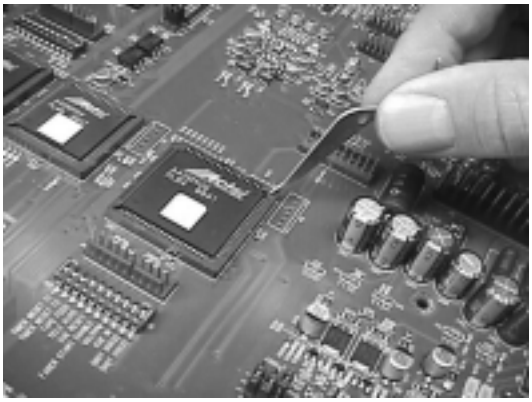
Each Gate Array chip has one corner that is cut off at an angle. It is extremely important to match this corner with the corner of the socket that is the mirror image of the cut corner. If these two corners do not match, the installation will not be successful.

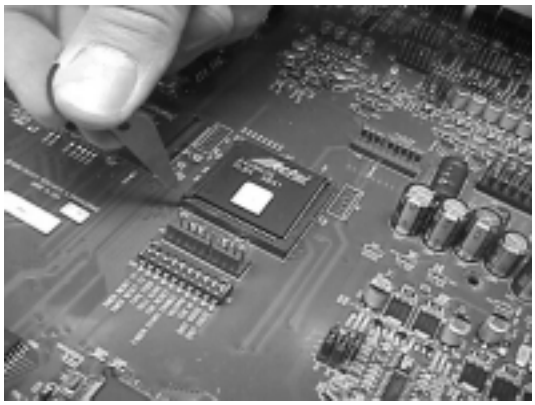
USING THE EXTRACTION TOOL

Each socket has two pry positions that are easily recognized by the narrow slot where the Extraction Tool fits.

Insert the short end of the Extraction Tool into one of the pry positions on the chip socket. Pry up on the chip using light pressure until the corner of the chip has come loose. Insert the tool into the diagonally adjacent pry position and pry up that corner of the chip. At this point, the chip may pop free or it may be necessary to use the opposite end of the Extraction Tool to pry the chip completely free from the socket.

NOTE: Only Gate Arrays with the number 21-193-4 need to be changed.





Removing chip using Extraction Tool

INSTALLATION POSITIONS

The Impulse Automation option can be installed in one of two separate locations on the console. Position #1 is at the very back of the console under the control surface on the upper left side. Position #2 is in the lower left corner of the console under the control surface.

NOTE: Even though installation position #1 is the most likely choice, position #2 is available as an alternative for 20-channel consoles that were manufactured shortly after the initial release of the product.

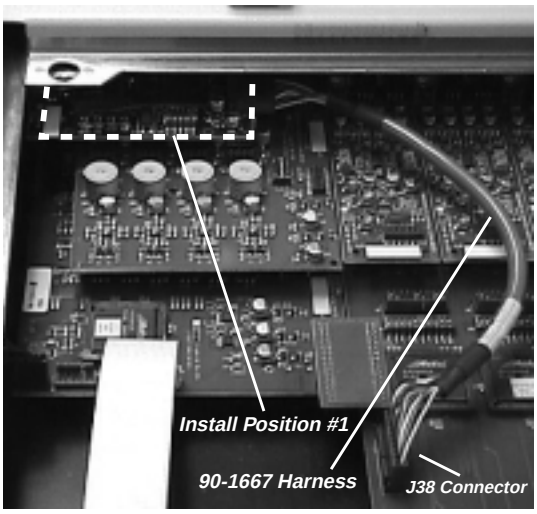
These earlier models will not properly accomodate the Impulse Automation board becaue of subtle measurement differences on the rear panel.

Installation Position #1

Loosen the two captive Phillips screws at the top of the control surface and raise it to expose the motherboard assemblies within the console.

Locate the serial interface opening in the inside left corner of the console. The Impulse Automation board (99-1043) will be fastened to the rear panel by two Phillips screws (38-144).

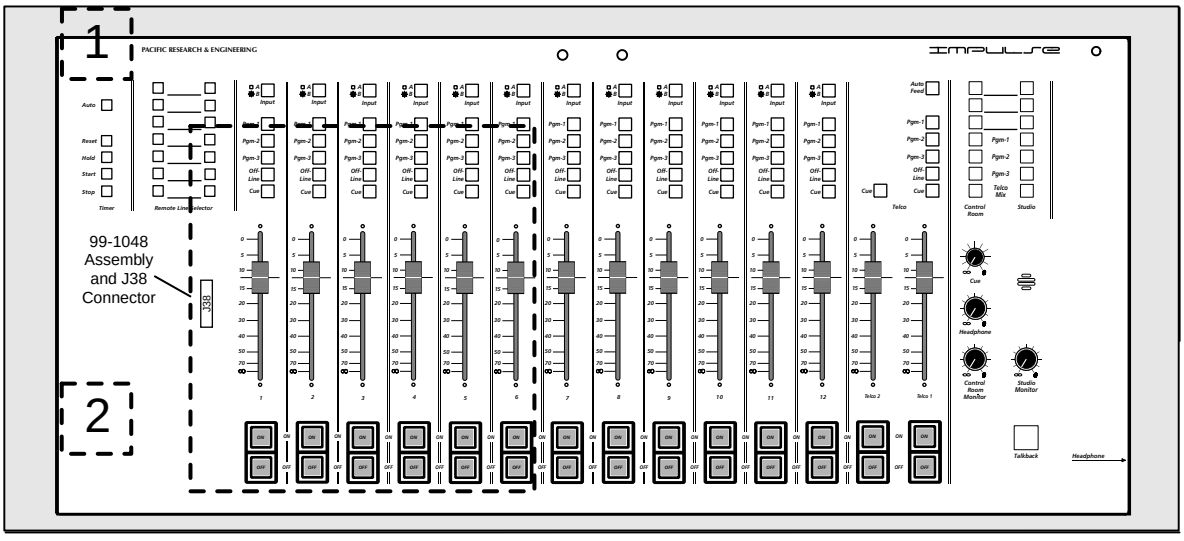
The wire harness (90-1667) attaches from the right side of the Impulse Automation board to the left side of the first DSP Motherboard (J38).



Return the control surface to its operating position and fasten the two captive Phillips screws. Finally, restore power to the console.

Installation Position #2

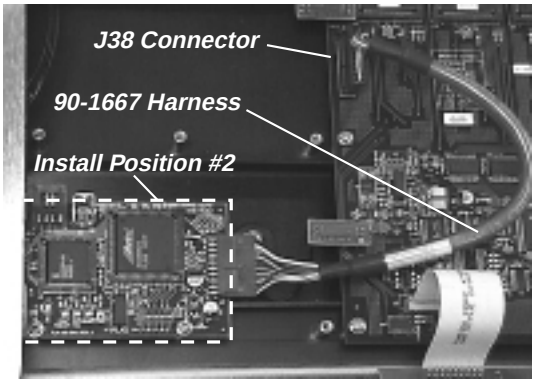
Loosen the two captive Phillips screws at the



Impulse Automation Installation Positioins

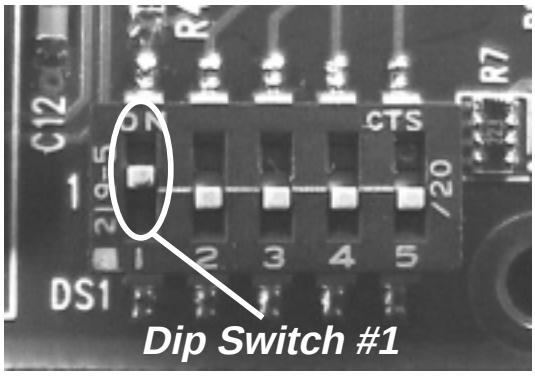
top of the control surface and raise it to expose the motherboard assemblies within the console.

Locate the two stand-off posts in the lower left corner of the console. The Impulse Automation board (99-1043) will be fastened to these offsets by two Phillips screws (38-78B).



The wire harness (90-1667) attaches from the right side of the Impulse Automation board to the left side of the first DSP Motherboard (J38).

Because the Impulse Automation board is located further inside the console, the RS-232 cable will need to be inserted through the cable access hole on the rear of the console in order to be connected to the Impulse Automation board.



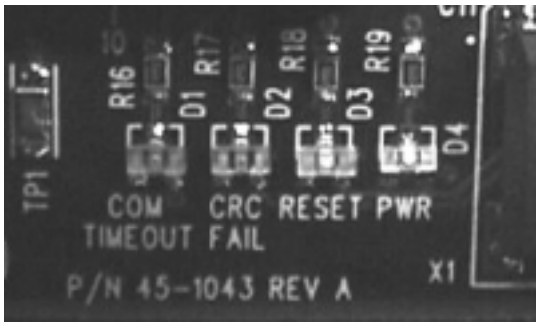
DIP SWITCHES

On the lower portion of the Impulse Automation board are a set of dip switches. The only switch that is crucial at this time is the #1 switch (first from left).

The #1 switch should be in the "ON" position if the console is a 12-channel configuration. The switch should be in the "OFF" position if the console is a 20-channel configuration.

AUTOMATION STATUS LED'S

The Impulse Automation board has four LED lamps that display the current status of the Impulse Automation board.



Com Time Out

The Com Time Out LED (Red) lights when the communications link between the Implulse Automation board and the delivery system is lost. If a communications link exists, the Comm LED will not light.

CRC Fail

This CRC Fail LED (Red) indicates that a serial communication error has occured within the console. If this LED lights regularly, contact PR&E's Tech Support department.

Reset

The Reset LED (Red) lights to indicate that the board has not yet established or has released all host-related control of the console. The Reset LED will typically light after the communications link has failed. As a result of the lost communication link, the board will release automation control of the console. At that time, all local control returns to the console and it must be operated in the traditional manner until the link has been restored.

When the communications link is restored, the Reset LED will turn off and the console will send a signal to let the delivery system know that it is back online.

NOTE: The Reset LED will be lit upon installation of the Impulse Automation board because a communications link has not yet been established. Once the link is established, the LED will turn off.

Power

The Power LED (Green) lights to confirm that the Impulse Automation board is receiving power.