HPR Gas Console Firmware Upgrade
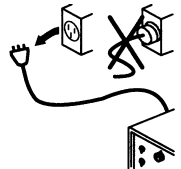
Field Service Bulletin

805040 – Revision 0 – September, 2005

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		WARNING
		ELECTRIC SHOCK CAN KILL
	Disconnect electrical power before performing any maintenance. **See the** *Safety Section* **of the systems Instruction Manual for more safety precautions.**	

Introduction

Purpose

This field service bulletin enables a trained technician to upgrade the firmware in a HPR130 or HPR260 power supply and in the HPR automatic or manual gas consoles.

The upgrade has 3 parts. Certain conditions must be met before performing the upgrades. Please read each section carefully to ensure that the upgrades are performed on the correct PCBs.

228035 – Kit Contents

Part Number	Description	Qty
027338	Tool: All purpose chip extractor	1

PART 1a – HPR manual gas console

Part Number	Description	Qty
081109	Firmware: manual gas console	1

PART 1b – HPR auto gas console (selection and metering consoles)

Part Number	Description	Qty
081110	Firmware: auto gas console	2

PART 1a – Manual gas console

Only install this firmware upgrade in the power supply if BOTH of the following conditions are met:

1. The manual gas console control board part number is 041912 (see marking on the rear of the control board and the control knobs will NOT have hex screws).

2. The manual gas console firmware part number is 081092 (see label on existing firmware chip).

If both conditions above are not met, please discard the 081093 Rev A firmware chip provided in this kit.

> **NOTE**: Installing the 081093 revision A firmware chip in a 041814 manual gas console control board may result in poor cut quality or consumable life

PART 1b – Auto gas console (selection console and metering console)

Only install this firmware upgrade in the selection console and the metering console the following condition is met:
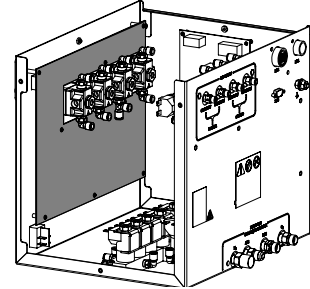
1. The automatic gas console firmware (part number is 081096) is revision A, B or C (see labels on existing firmware chips).

If the condition above is not met, please discard the 081096 Rev D firmware chip provided in this kit.
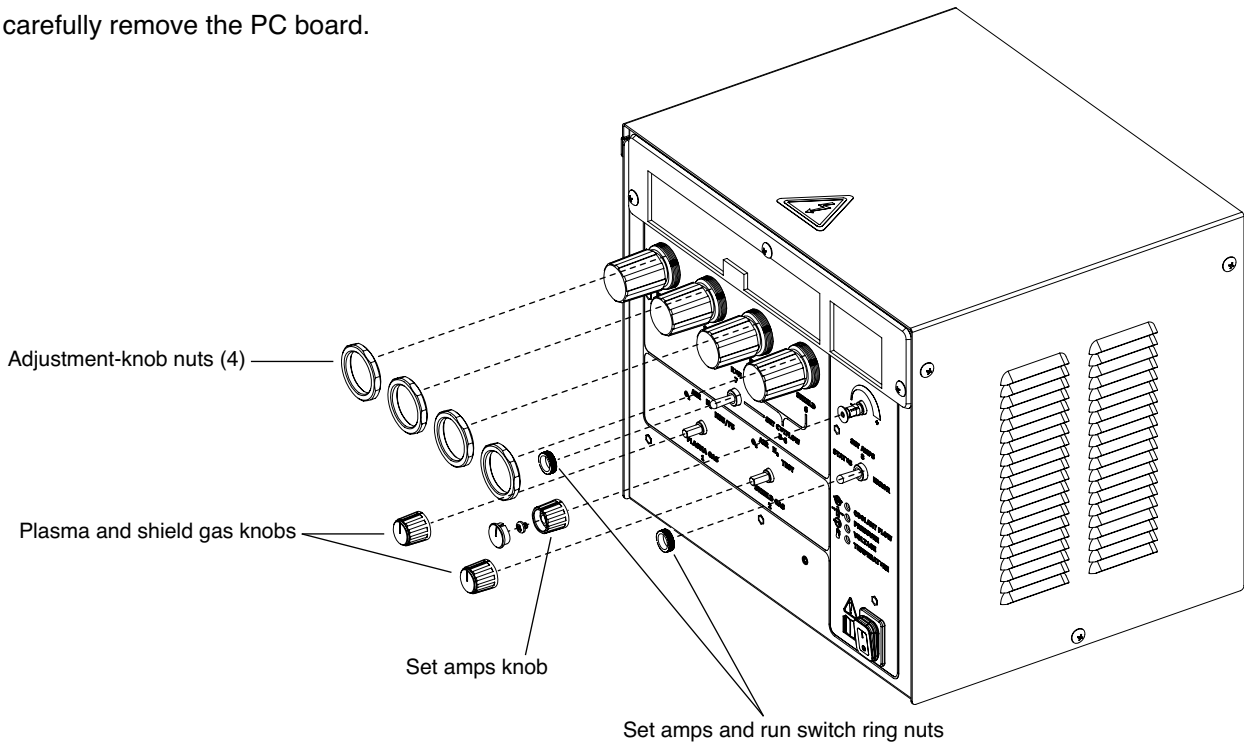
> IMPORTANT NOTE: The auto gas firmware upgrade will also require an upgrade to the cut charts in the CNC controller. Please contact your CNC manufacturer to upgrade the cut charts to match the new 081096 Rev D firmware.
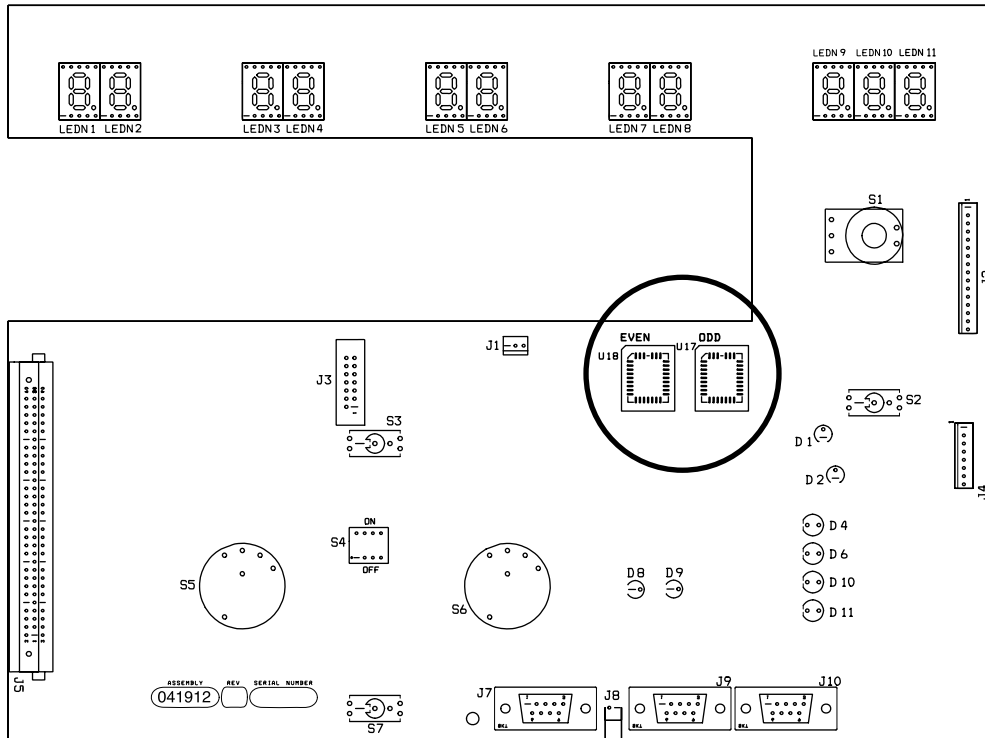
PART 1a – HPR manual gas console

1. Turn OFF all power to the system.

2. Remove the cover from the gas console to access the control PCB.

3. Remove the PC board.

   3.1 Remove the ring nuts from the SET AMPS (8) and RUN (7) toggle switches.

   3.2 Loosen the hex head screws (older models) on the PLASMA GAS (1), SHIELD GAS (2) and SET AMPS
        knobs. Remove the knobs. The hex head screw is 1/16".

      3.2.1 On newer gas consoles the PLASMA GAS (1) and SHIELD GAS (2) knobs can be pulled off. You must
             remove the cap from the SET AMPS knob and remove the screw before you can remove the knob.

   3.3 Remove the 4 plastic nuts from the adjustment knobs

   3.4 Remove all connectors from the back of the PC board.

   3.5 Remove 8 screws from the back of the PC board.
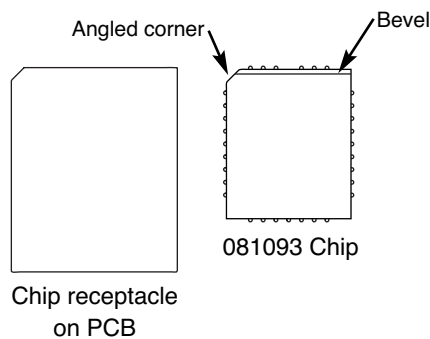
   3.6 carefully remove the PC board.

Adjustment-knob nuts (4)

Plasma and shield gas knobs

Set amps knob
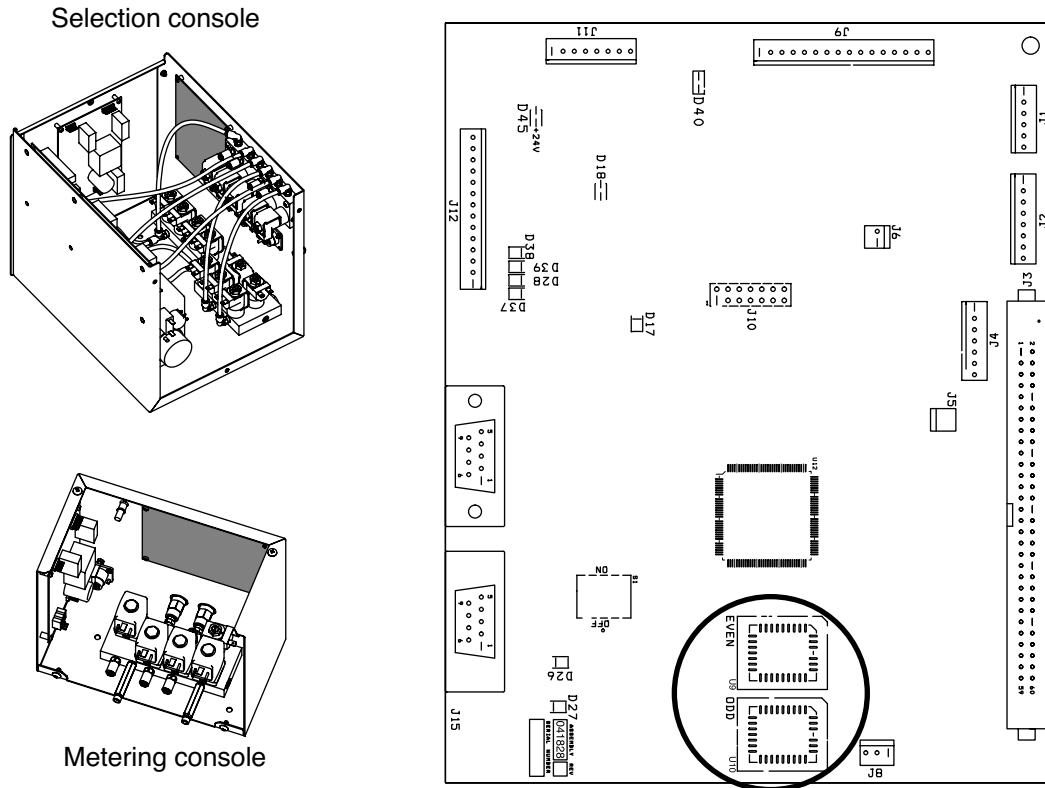
Set amps and run switch ring nuts

4. Remove the even (U18) and odd (U17) chips from the board using the extraction tool (027338) provided in this kit. See figure above

5. Install new chips (081093) onto the control board.

> NOTE: Make sure the chips are oriented correctly before installation. There is a bevel on the top edge of each chip and the upper left corner is angled (see figure below).

Angled corner   Bevel
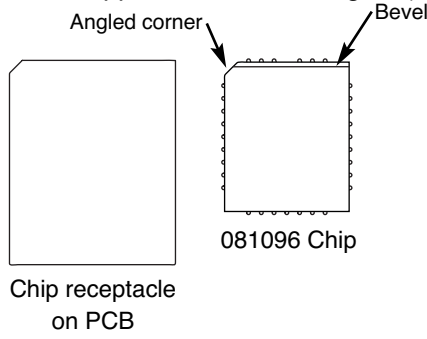
081093 Chip

Chip receptacle
on PCB

6. Replace the right side cover and turn ON the power. The system will be idle while the software code is being updated. The update process may take up to 1 minute to complete. The system may show a "watchdog interlock" error after the update. Turn the power OFF and then ON to clear the error.

PART 1b – HPR automatic gas console

Selection console

Metering console

1. Turn OFF all power to the system.

2. Remove the covers from the selection console and the metering console to access the control PCB (see figure above).

3. Remove the even (U9) and odd (U10) chips from the board using the extraction tool (027338) provided in this kit.

4. Install new chips (081096) onto the control board.

> NOTE: Make sure the chips are oriented correctly before installation. There is a bevel on the top edge of each chip and the upper left corner is angled (see figure below).

Angled corner   Bevel

081096 Chip

Chip receptacle
on PCB

5. Replace the right side cover and turn ON the power. The system will be idle while the software code is being updated. The update process may take up to 1 minute to complete. The system may show a "watchdog interlock" error after the update. Turn the power OFF and then ON to clear the error.