Technical Information Sheet

Adjusting and Programming PLC FP-X C60R

These instructions apply to PLCs installed in A.W.T. Accu-Print™ and High-Tect™ series printing presses except the Long Stroke models. This information sheet includes procedures for precision adjustments, reprogramming and battery replacement that should be attempted only by advanced users. If in doubt please contact A.W.T. technical support personnel before proceeding.

Overview

The Programmable Logic Controller (PLC)—the central processing unit for your A.W.T. printing press—is located inside the main electrical enclosure. Precision adjustments may be made on the PLC to change the timing of vacuum and blowback functions and the engagement of registration pins. The PLC contains a battery that may require replacement after several years of use and is also the component used to reprogram the printer in the event of failure.

CAUTION

PLC settings have been factory configured and changes should be attempted only by advanced users. The control functions outlined in this information sheet apply to A.W.T. printers generally, but they may differ for your machine depending on its configuration. We strongly recommend contacting A.W.T. technical support personnel before proceeding. Improper adjustments may void your warranty.

Timing Adjustments

Adjustments to various timing functions are made by turning the control screws *(Figure 1, #V0–V3, and Figure 2, next page)* with a small Phillips screwdriver as follows:

V0. **Blowback delay:** the interval before blowback is initiated following a completed print cycle. Turning the controller clockwise increases the time (0 to approximately 2.5 seconds).

V1: **Vacuum delay:** the interval before the vacuum table is activated at the beginning of a print cycle. Turning the controller clockwise increases the time (0 to approximately 2.5 seconds).

V2. **Registration pins delay:** the interval before registration pins are raised following a completed print cycle. Turning the controller clockwise increases the time (0 to approximately 2.5 seconds).

V3. **Spare:** reserved for future use.

Figure 1. Close-up of PLC controls.

Battery Replacement

If your printer alerts you that the PLC battery is low (red LOW BATTERY indicator illuminated on the main control panel and/or a "BATTERY LOW" message on the main touchscreen), call A.W.T.'s parts division, Graphic Parts International at 800.444.PART (within the USA) or 773.725.4900 and order part #GAO-PLCFPXBT. It will generally take two to three days to receive.

CAUTION

Once you have received a "battery low" indicator, NEVER shut off the main power supply to the press until you are ready to replace the battery. If the battery runs down and the main power supply is off, you risk corrupting or erasing the printer's programming. If that occurs, you will have to reprogram the PLC *(see "Programming the PLC," next page)*.

Wait until you have a replacement before proceeding with these steps. When ready to proceed, we recommend you turn off the main power supply to the printing press (do not simply turn off the printing press). You have approximately five minutes to complete these procedures while the main power supply is shut off.

CAUTION

Once you have shut off the main power supply you must replace the battery within about five minutes of removing the old one or risk corrupting or erasing the printer's programming.

The battery is located under the COM MODULE of the PLC *(Figure 2)*. Remove the two screws holding the COM MODULE in place, then carefully pull out the module and set aside. Remove the snap-in cover over the battery compartment *(Figure 3)*, then carefully disconnect the battery's plug-in connector and lift the battery out of its receptacle.

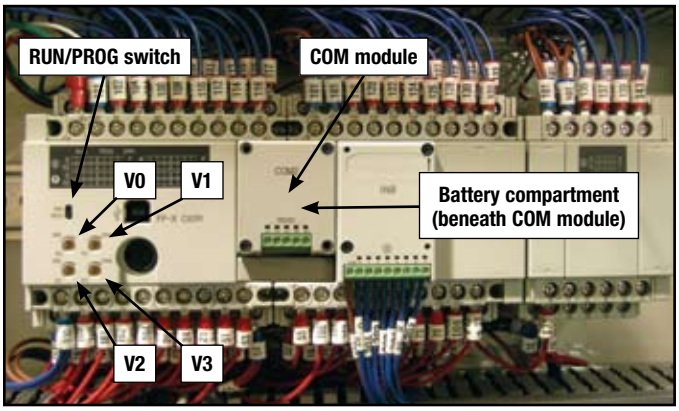

Figure 2. Key PLC components

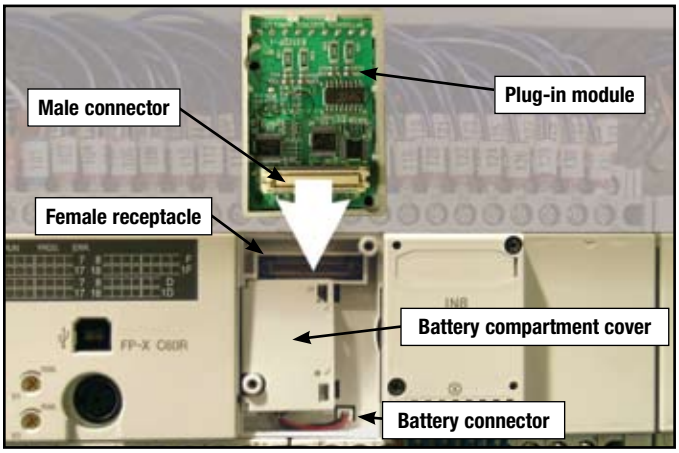

Figure 3. Battery replacement and reprogramming the PLC.

Place the new battery into the compartment and carefully plug the connector into the receptacle. The plug will only fit into the receptacle with the proper polarity observed (red wire to the right, or positive, terminal). DO NOT force the plug.

Once the battery has been installed and connected *(Figure 4)*, snap the battery cover *(Figure 3)* back in place. Plug the COM MODULE back into its connector and replace the screws holding the module in place.

Restore the main power to the press and resume normal operations.

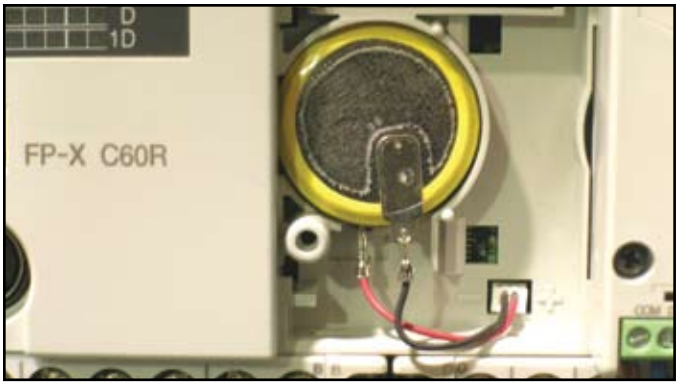

Figure 4. Battery inserted and connected.

Reprogramming the PLC

If your printer's PLC programming is erased or becomes corrupted you will need to reprogram the PLC. Call A.W.T.'s parts division, Graphic Parts International at 800.444.PART (within the USA) or 773.725.4900 and order part #GAO-PLCFPXROM. You will need to provide your printer's model number and program number (located on the nameplate, usually found on the main electrical box).

You will receive a plug-in module that contains the programming (EPROM) for the printing press. Once you have the new module in hand, follow these steps:

1 Turn off or disconnect the main power supply to the printing press (do not simply turn off the printing press).
2. Remove the screws holding the COM MODULE *(Figure 1)* in place and then carefully pull the module out of its receptacle and set aside—it will be reinstalled.
3. Switch the RUN/PROG switch *(Figures 1, first page, and 2)* to PROG (down)
4. Insert the program module you received from A.W.T. in its place. The module contains a male connector that plugs into a female receptacle on the PLC *(Figure 3)*.
5. Once the program module is in place, restore the main power supply to the printing press.
6. Switch the RUN/PROG switch back to RUN (up).
7. Again turn off or disconnect the main power supply to the printing press.
8. Remove the program module from the PLC and carefully insert the COM MODULE in its place.
9. Replace the screws that hold the module in place.
10. Restore the main power supply to the printing press.

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