Mechanical Mounting Notes

GEN2 PSA-66-ST2 Printer

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REV.C

CE The PSA-66-ST2 printer described in this manual is in compliance with all applied CE standards.

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Table of Contents

1 Overview

This publication provides information and considerations for the mechanical mounting of the GEN2 printer in a gaming machine.

1.1 GEN2 Components

The GEN2 consists of two primary components: the Printer Module and the Mounting Rail. The Printing Module contains all the electronic components. The Mounting Rail attaches the printer mechanically to the game and provides a permanent attachment point for the printer's coiled cable.

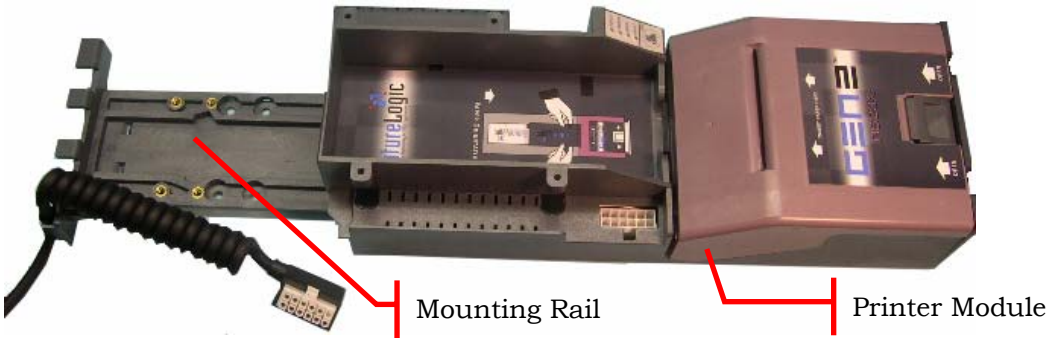

Figure 1-1 GEN2 Component Pieces

The table below provides overall dimensions for the GEN2 unit.

Note: GEN2 CAD models are available on http://www.futurelogic-inc.com for use by the game developer in integration.

Table 1-1 Overall Envelope Dimensions

Parameter	GEN2	Dimension	Notes
Height	Mounting Rail and Printer Module	2.530"	1
Width	Mounting Rail Printer Module	4.330" 4.330"	
Length	Mounting Rail and Printer Module	12.000"	
Mounting Rail Attachment Points	2 sets of 4 clearance holes + 2 set inserts	M4 M4	
Bezel Mounting	6 inserts	M3	

Notes:

1. The entire GEN2 printer slides. It rides on a guide on the bottom of the unit.
2. The M4 clearance holes attach the GEN2 to a mounting plate with M4 studs (see Mounting the Printer on page 2).
3. Typically, only four M3s are needed to mount a bezel. The extra set of M3s allows a choice of mounting options.

2 Mounting the Printer

There are a number of mounting holes and inserts on the bottom of the GEN2 chassis. These holes provide mechanical pickup points to facilitate the mounting process. There are two sets of four M4 inserts and two sets of four M4 clearance bolt-through holes which reside on the base plate. The M4 bolt-through holes are designed for a mounting stud to pass through and an M4 nut to be added from the top side of the Mounting Rail.

Note: Only one set of 4 mounting points needs to be used. It is important that the printer rail is mounted using four attachment points.

You can mount the GEN2 either horizontally or at an angle of up to 80 degrees. If you are mounting the GEN2 at an angle of over 60 degrees, pay special attention to the flow of the fanfold paper stack.

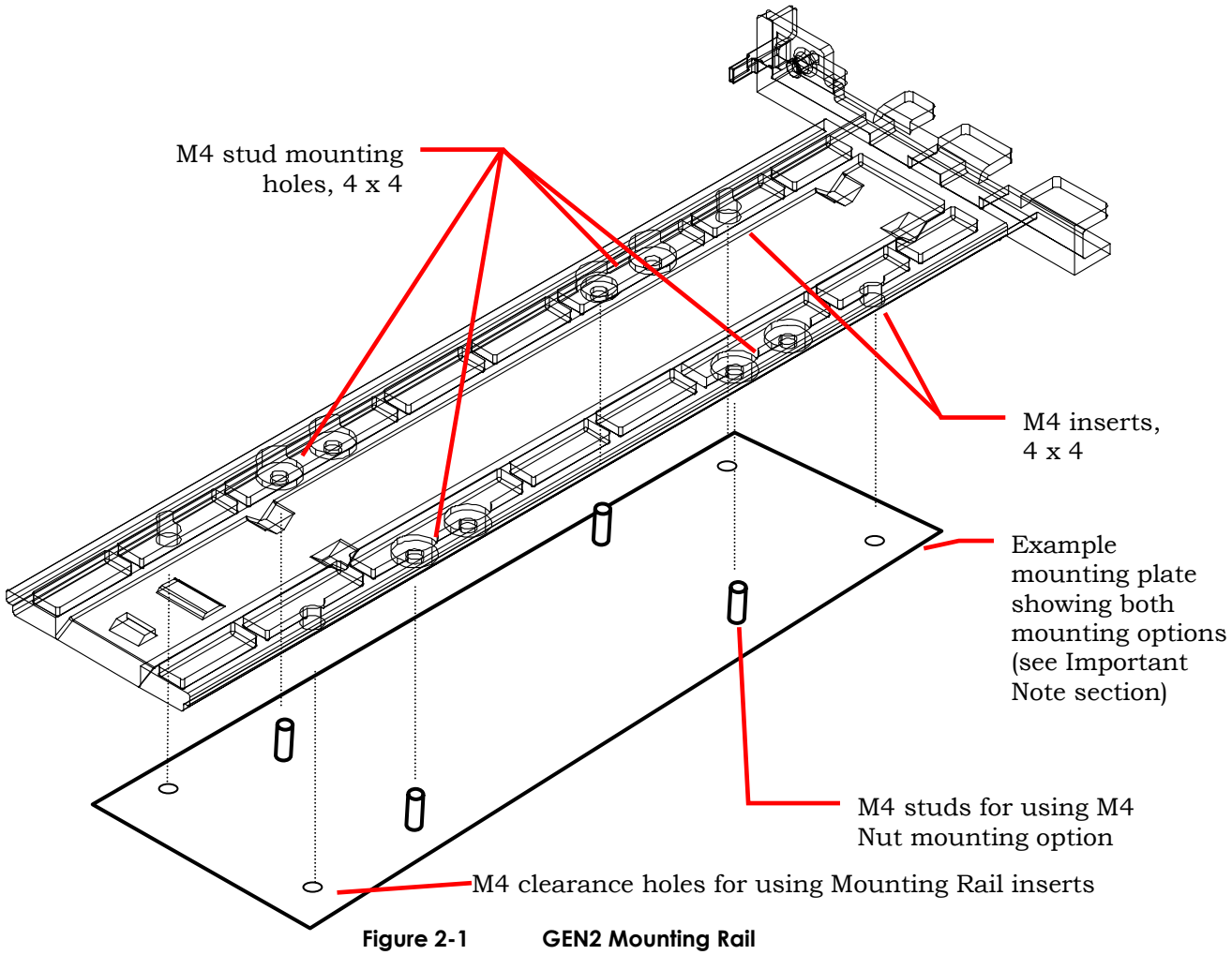

Figure 2-1 GEN2 Mounting Rail

2.1 Important Note

The GEN2 achieves its frame ground through copper clips located on the bottom of the printer. The plate used to mount the GEN2 to the game must:

- Be made of metal and be conductive.
- Have a good connection to the frame ground of the game.
- Be of sufficient width and length to guarantee full contact of the GEN2's copper clips with the mounting plate surface throughout the GEN2's entire sliding travel range.

Given that the conditions listed are met, the GEN2 should meet all required ESD and EMI standards.

Important Information!

Do not remove the ground screw in the rail as it will release the internal nut!

After removing the printer, do not slide the unit on a tabletop or other surface. Doing so will cause damage to the copper grounding clips on the bottom of the unit.

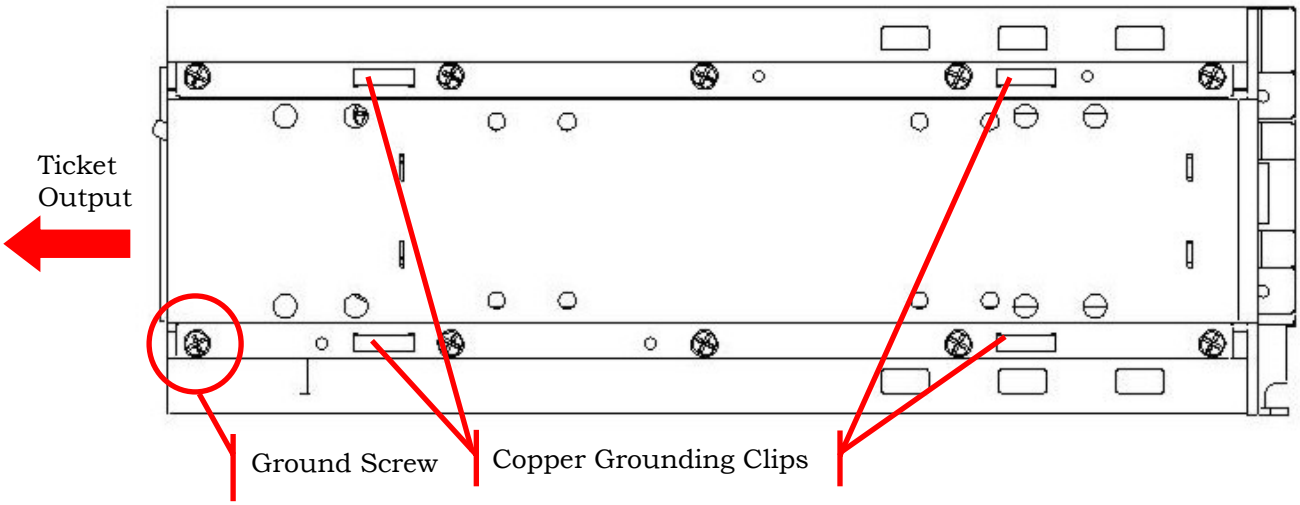

Figure 2-2 Ground Screw and Copper Grounding Clips Location

2.2 Accessing the Mounting Rail

CAUTION!

ESD Sensitive Equipment!

Electronic boards and their components are sensitive to static electricity. Care must be taken during all handling operations and inspections of this product in order to ensure product integrity at all times.

Do not handle this product out of its protective enclosure while it is not used for operations purposes unless it is otherwise protected.

Discharge your clothing before touching the assembly. Discharge tools before use.

Whenever possible, unpack or pack this product only at EOS/ESD safe workstations. Where a safe workstation is not guaranteed, it is important for the user to be electrically discharged before touching the product with his/her hands or tools.

To access the Mounting Rail, the Printer Module and the Mounting Rail must be separated.

1. Disconnect the Coiled Cable Connector.

Figure 2-3 Disconnect the Coiled Cable Connector

2. Slide out the Printer Module until it locks.

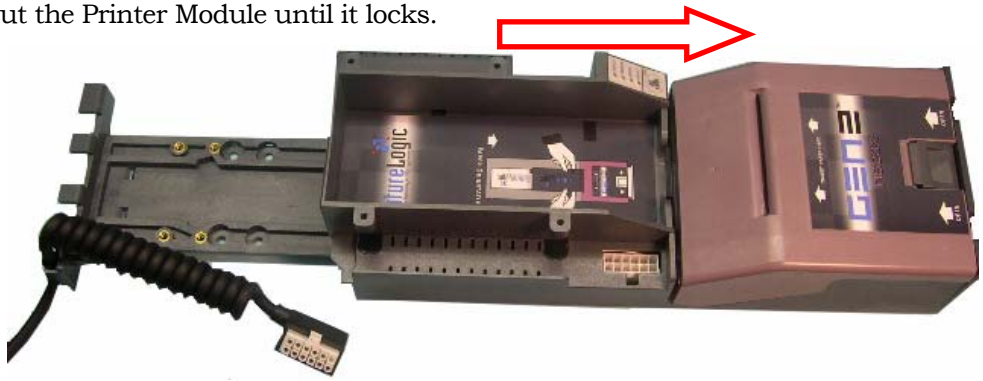

Figure 2-4 Slide Out the Printer Module

3. Push in the Release Bar (located on the bottom side of the Printer Module near the front of the unit) to release the locking mechanism between the Printer Module and the Mounting Rail.

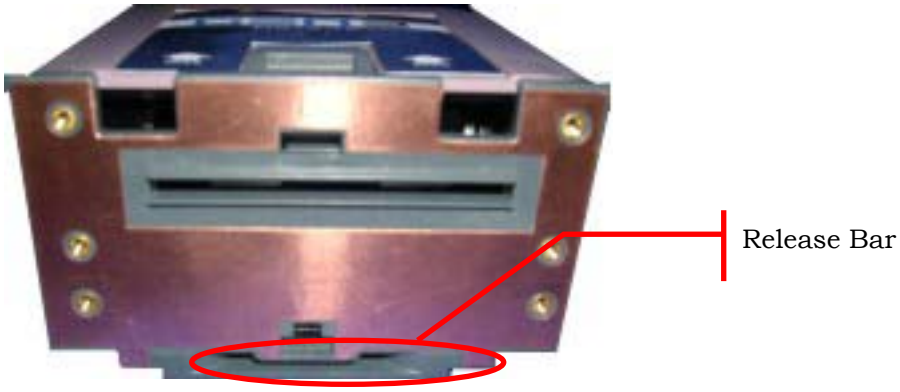

Figure 2-5 Release Bar

4. With the Release Bar pressed, pull the Printer Module clear of the Mounting Rail.

   The two pieces separate.

3 Bezels and LED Light Boards

To complete packaging the GEN2 within a game, a bezel should be added to the front of the unit.

There are six M3 mounting holes on the front of the unit to be used for mounting the bezel. A number of bezel options are available for the GEN2 unit. For more information on these options, please refer to Appendix D in the GEN2 Operators and Technicians Manual or the GEN2 Developers Manual.

The GEN2 also has a 3 pin connector at the front of the printer and a 3 pin connector at the end of the coiled cable for driving up to two LED light boards. For more information on this port, please refer to Chapter 4 in the GEN2 Developers Manual.

If you choose to design your bezel or presentation chute, please note the following design rules you should follow:

1. Paper exits the GEN2 printer at roughly a 45 degree angle to the horizontal. Always design your bezel to avoid striking a surface at a more than a 35 degree angle to prevent back pressure and avoid jams.
2. Use a minimum of four mounting points on the front of the printer to attach and chute or bezel.
3. Consider protection against fluid spills and debris in the design.
4. If adding a LED or light board to your design, consider that this will be an ESD entry point to the printer. One of the pins on the front LED board connector on the GEN2 provides a direct connection to frame ground. Your LED PWB should have a frame ground ring or mesh on it which attaches through the assembly cable to the frame ground pin on the GEN2. Please refer to Chapter 4 in the GEN2 Developers Manual for more information on the GEN2 LED board connector.

4 Paper Tray

The GEN2 has a capacity of 300 sheets of standard 4.5mil gaming ticket paper. Paper tray extenders are available to give the GEN2 total capacities of 600 and 900 tickets. These will add to the height dimension of the printer. Be sure to check that the mounting angle does not interfere with the flow of the fanfold paper during operation.

5 Other Considerations

Although the electronic components of the GEN2 have generally been sealed within the chassis, consider the following factors when deciding on the packaging of the GEN2 within the end system:

- The unit is not water tight.
- The unit is not dust tight. If the unit is being used in a dirty environment, fine particulate abrasive matter can also be a problem for the thermal print mechanism. If necessary, a dust shield or other arrangement can be used to reduce debris falling into the printer mechanism area.
- Fluids or other debris that are allowed to accumulate on the Paper Taken sensor located at the front of the printer can affect the performance of these optical devices.
- To protect the GEN2 printer against ESD and EMI problems, be sure that the mounting plates provides a good surface for the Printer Module's copper clips to contact over its entire sliding range as indicated in the Important Note section earlier in this document.

CAUTION!

ESD Sensitive Equipment!

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Do not handle this product out of its protective enclosure while it is not used for operations purposes unless it is otherwise protected.

Discharge your clothing before touching the assembly. Discharge tools before use.

Whenever possible, unpack or pack this product only at EOS/ESD safe workstations. Where a safe workstation is not guaranteed, it is important for the user to be electrically discharged before touching the product with his/her hands or tools.

6 Mechanical Dimensions

The following figures identify the mechanical dimensions of the PSA-66-ST2 printer.

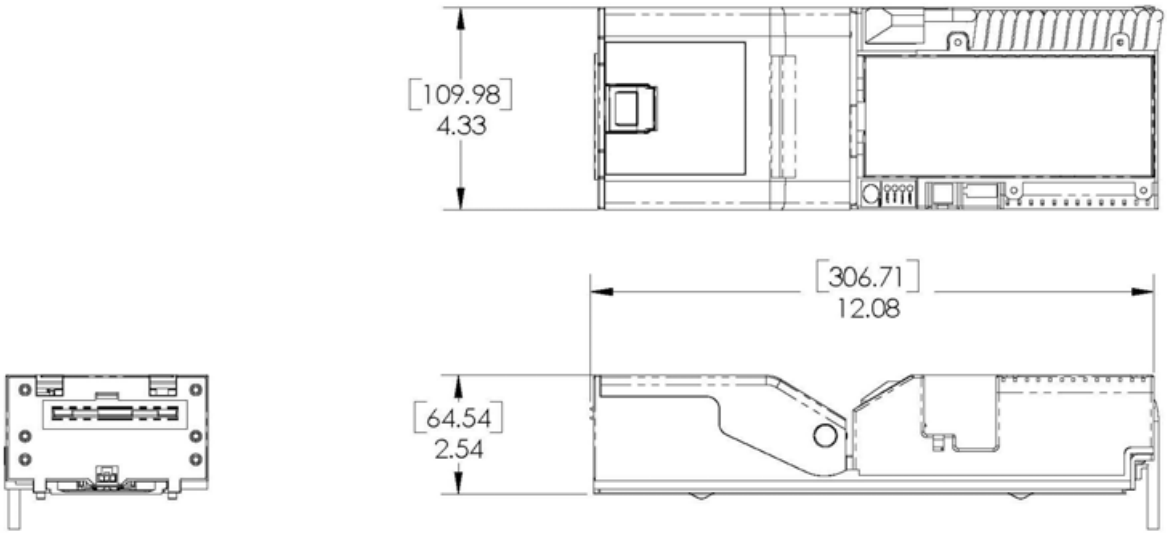

Figure 6-1 PSA-66-ST2 Printer

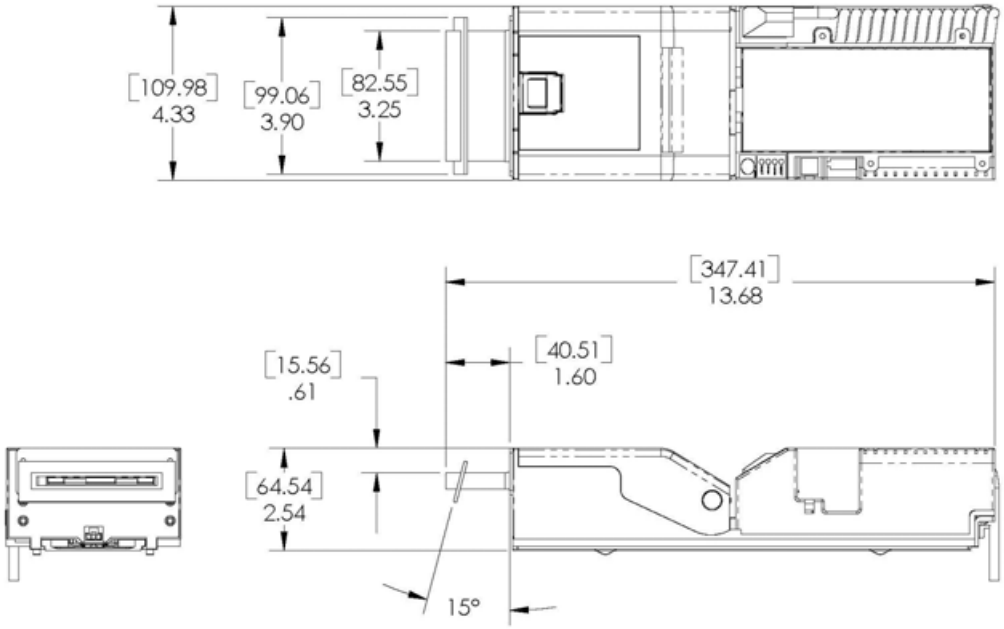

Figure 6-2 PSA-66-ST2 Printer with Green Bezel

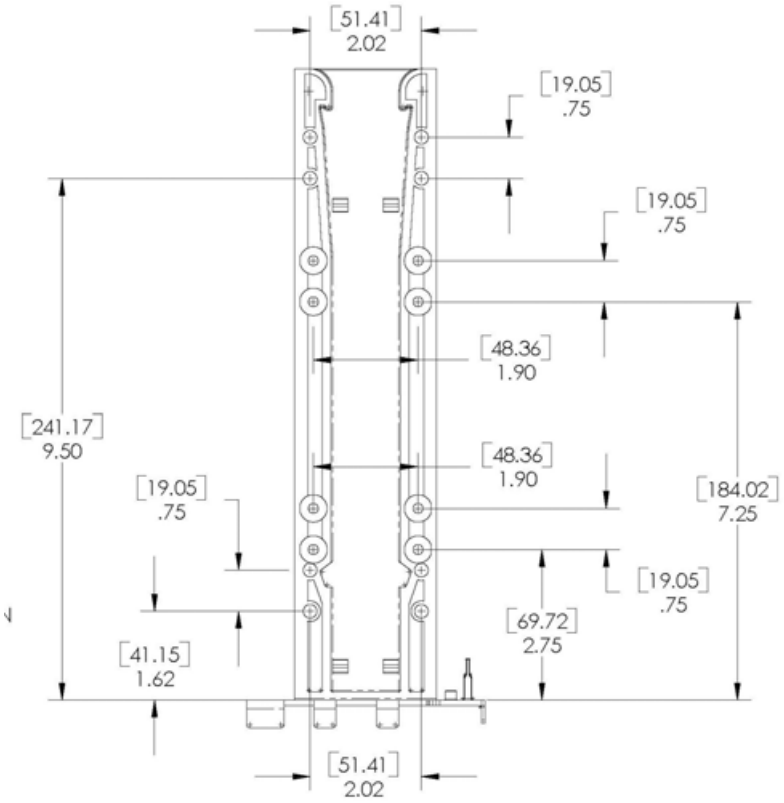

Figure 6-3 Mounting Rail

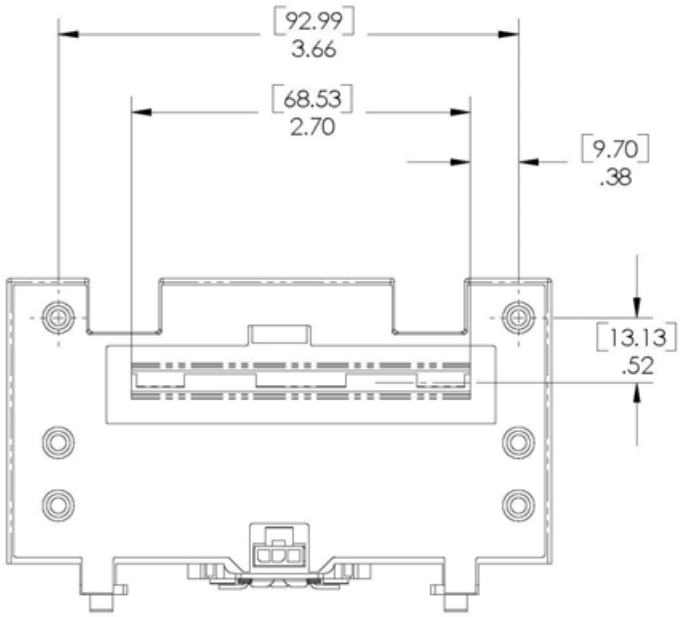

Figure 6-4 Bezel Mounting Points

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