

GLINTTONETM (1988) – Defensive Disclosure Published by DRIDON LLC

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Title: GLINTTONE™ (1988): Liquid-Based, Manually Controlled Light Modulation System for Transparent Surfaces

1. Abstract

This disclosure describes a manually controlled optical system for dynamically modulating the transparency of glass or transparent materials using a liquid medium. Originally developed in 1988 and prototyped in 1989 in Canada, the system allows users to regulate incoming light—without altering the light source or relying on permanent films, tints, or solid-state materials. This early smart glass invention enables user-defined light control, privacy, and solar glare reduction through mechanical or fluidic means. Some of its applications include transportation, architecture, aerospace, and privacy.

This invention was originally conceived in September of 1988, officially documented in writing on December 17, 1988, and prototyped on April 13, 1989, in Toronto, Canada. Witnesses signed off on the early demonstration, making this not only a technical innovation but a historically anchored act of original design—thereby establishing prior art as of December 5, 1988, and blocking any subsequent patent claims on substantially similar concepts.

Additional note.1

¹ Earlier documented evidence exists. Inventor is in the process of locating these—stored due to relocation.

2. Inventor Background

The invention was created in 1988 by an engineering honor's graduate who had subsequently chosen to pursue studies in physics, as he puts it: "To better understand the workings of the universe." Initially driven by emotional necessity and creative escape, the inventor was inspired to solve personal and practical problems with traditional window tinting—seeking a way to reclaim control over visibility, privacy, and light.

Drawing upon a foundational understanding of optics and material science from engineering, **Glinttone**TM was born.

"I had a small idea destined to change the face of God's Earth. All praise[s] go out to the discoverer of glass."

— Notes to my future children, August 28, 1989 [See Appendix, Page 14, Figure 9].

3. Technical Field

Light modulation systems, smart glass, fluid-based optical control, energy efficiency, adaptive materials.

4. Background of the Invention

Permanent window tints, whether via tinted glass or plastic films, are inflexible. They are optimal for only part of the year and degrade visual clarity in low-light conditions—particularly in autumn and winter. Additionally, their legality and effectiveness vary by jurisdiction and use-case.

Key Challenges Identified (from inventor's original notes):

- Permanent tinting reduces safety in winter
- Tint legality varies and is hard to enforce
- Lack of privacy on demand
- Inability to revert tinting once applied
- Psychological or emotional need for variable visibility

5. Summary of the Invention:

GlinttoneTM (1988) introduced a system where liquid could be manually introduced or withdrawn between transparent layers to control the tint level/intensity in a glass panel.

Key Features:

• Manually operated liquid-tinting mechanism

- Allows transition from clear to tinted without mechanical movement of the window
- Enables black-out privacy or full transparency on demand
- Prototyped in 1989, witnessed, dated and signed

6. Use Cases / Applications

- i. **Automotive:** Improves visibility in winter, controls glare in summer and deters theft by obscuring contents of parked vehicles. Allows driver-controlled privacy and solar management without electronics. [See Appendix 8]
- ii. **Residential / Commercial Architecture:** Seasonal light control without blinds or shades. Enhances occupant comfort, reduces energy load, and provides variable privacy. Ideal for retrofitting existing glass structures.
- iii. **Security & Privacy:** On-demand visibility control for sensitive environments—executive offices, interrogation rooms, or private residences. Can be implemented without relying on digital infrastructure or power sources.
- iv. **Legal / Ethical Compliance:** Offers a reversible, user-controlled method for achieving tint benefits while remaining compliant with local laws regarding transparency and driver visibility.
- v. **Facade Coloring**TM, **Design**, **and Weathering**: Enables dynamic building facades that can change hue or opacity based on injected fluid properties (e.g., color, reflectivity). Useful for both aesthetic expression and passive solar modulation. Can simulate weathering or aging effects over time without physical degradation.
- vi. **Defense & Tactical Operations:** Provides field-configurable camouflage and visibility control for vehicles, observation posts, and equipment. Unlike electronic systems, the manual fluidic mechanism is EMP-resistant and does not emit detectable signals.
- vii. **Military Optics & Camouflage:** Adaptable lens tinting or masking in harsh environments. The ability to rapidly transition between opaque and transparent states without digital triggers makes it suitable for covert observation or sensor masking.
- viii. **Aerospace & Aviation:** Potential for cockpit shading, payload concealment, or viewport adaptation under varying light conditions. A low-power, manually controlled system is advantageous in situations requiring redundancy or simplicity.
- ix. **Disaster Response & Temporary Infrastructure:** Can be used in rapidly deployed shelters or mobile units to manage visibility, temperature, and privacy without reliance on electrical systems.

7. Operation Description (Diagrams Referenced):

The glass assembly consists of two panes sealed to form an internal vacuole designed to receive and contain a liquid of selected optical density. Liquid is pumped in or out through dedicated inlet/outlet vessels at the bottom, displacing air that escapes through air outlets equipped with ball valves. These valves seal automatically when the vacuole is filled, enabling dynamic control of transparency. The system can be operated manually or automated.

See Appendix Figures 1–3, 4A-D

See Appendix Figure 10 for a redrawn (2025) detailed assembly diagram illustrating the liquid modulation system, including the vacuole, fluid vessels, and ball valve mechanisms.

8. Prototype Details

- Built and demonstrated on April 13, 1989
- Witnessed and confirmed by multiple signatories
- Signed and verbal privacy commitment / agreements
- Witness confirmation on April 13, 1989, prototype demonstration is included in the Appendix (Figure 7A), with redacted signatures and initials. Full originals are held privately by the inventor/invention owner.
- Original witness re-affirmation letter (2025), Appendix (Figure 7B).

9. Inventor's Observations & Rationale

In the aftermath of a deeply personal loss in 1988, I found myself emotionally disoriented — searching for ways to regain privacy and peace. In that moment, the idea of blurring the windows of my vehicle wasn't about aesthetics or technology — it was about creating a space to retreat, to regain control and to feel hidden when I want to be. The inventor writes:

"I wanted to escape. I'd find escape if I could blacken this window in my van ... Those times I was successful, I wanted to be seen and known for my relentless efforts."

This emotional insight birthed the practical question: Why not ... pump a dark liquid into the glass for the moments you want to hide—and remove it when you want to be seen?

It was from this reason and aforesaid psychological necessity that **Glinttone**TM was born. See Appendix Figure 5A-B.

10. Claim of Prior Art:

The concept described herein **predates** smart glass solutions currently using electrochromic, thermochromic, or polymer-dispersed liquid crystal methods. This invention presents a distinct class of manual fluidic control mechanisms for variable light modulation in glass. *The invention is not merely a technical innovation but a historically anchored act of original design*.

11. Disclosure Notice:

This document is published as a **Defensive Disclosure** for sole purpose of establishing prior art *as of December 05, 1988*, and to prevent others from patenting the ideas contained herein.

A functional prototype was built and demonstrated on **April 13, 1989**, in Toronto, Canada, and was signed and witnessed under confidentiality agreement. No permission is granted to use, reproduce, implement, reverse-engineer, or commercialize any part of the invention.

All intellectual property and commercial rights are explicitly reserved by the inventor/invention owner, including but not limited to rights of manufacture, licensing, publication, and derivative works.

This reservation applies under Canadian and international intellectual property laws and remains in force regardless of public disclosure.

12. Anticipated Applications and Vision

Excerpts from the inventor's original notes describing potential future uses of the **Glinttone**TM system beyond initial automotive intent (tinting).²

13. Milestones and Succession

The inventor thinks ahead via a personal messag	јe
See Appendix Figure 9	

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² See Appendix Figure 8

13. Signature & Date

Inventor Name/Owner: DRIDON, LLC

Date of Original Conception: September 1988³

Date of Specification Notes of Invention: December 17, 1988

Date of Prototype Completion: April 13, 1989

Date of Demonstration, Witnessing and Signatories: April 13, 1989

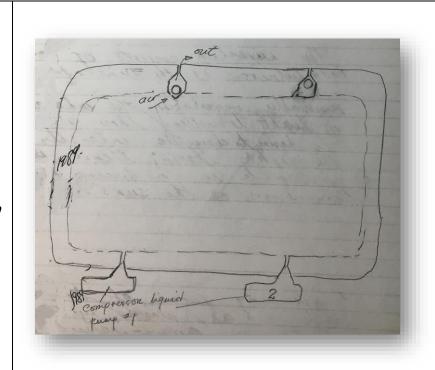
Location: Toronto, Ontario, Canada

[See Appendix Figure 6]

APPENDIX FIGURES & SUPPORTING MATERIALS

GLINTTONETM (1988)

Initial concept for fluid-filled tinting window showing two adjacent glass panes or a unified pane with an internal vacuole (cavity) to receive the liquid medium. Shows side-section construction with indicative borders and functional zones: pumps, channels and ballvalves enclosed in hexagonal enclosures.



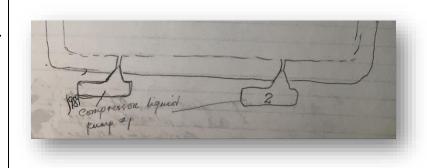
<u>Figure 1</u>: Original Concept Sketch – Glass Layer with Internal Vacuole (1988)

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³ Likely early. Supporting document searches ongoing.

GLINTTONETM (1988)

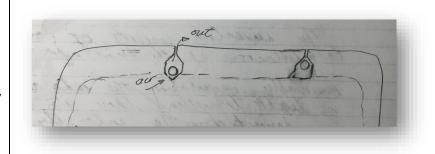
Depicts possible configurations for manual or assisted pumps: in parallel (both in/out), or in series (one dedicated inlet, one outlet).



<u>Figure 2:</u> Original Concept for Mechanical Pump Configuration (Series and Parallel) to inject or extract liquid into and out the panel cavity.

GLINTTONETM (1988)

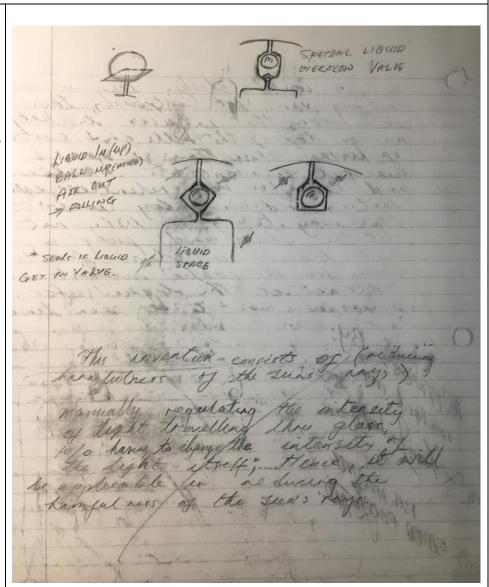
Detailed view showing anterior air-release valves (ball-valve chambers). Liquid is pumped into the vacuole to increase opacity; ball-valves float to seal air outlets, enabling full tinting without fluid loss.



<u>Figure 3:</u> Original Concept Air- / Fluid-Release, Fluid-Sealing Mechanism

GLINTTONETM (1988)

Full page of inventor's notes on possible designs for the air-/ fluid release valve and what the invention consists of. (This is one of several original pages.)



<u>Figure 4A:</u> Original Concept Air- / Fluid-Release, Fluid-Sealing Mechanism

The following original diagrams show versions of the Air- / Fluid-Release, Fluid-Sealing Mechanism (ball-value sealer.)

Figure 3B shows an early and simplified version of the ball-valve sealer. It moves up with liquid-inflow and seals at its base when liquid is sucked out of the vacuole.

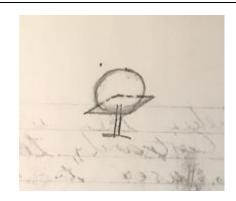


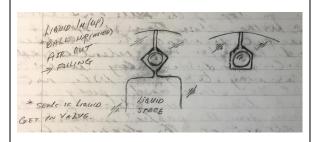
Figure 4B: Ball-Valve sealer.

The diagram to the right depicts a more complete enclosed, sealing mechanism. The ball moves up when fluid pressure rises, air in the system is displaced, sealing off the top section to prevent overflow. When the liquid is removed, the ball falls and seals off the vacuole.



<u>Figure 4C:</u> Cylindrical Fluid Air-Release, Fluid-Sealing Mechanism

Figure 3D shows alternative versions of Figure 3C embedded into the glass construct for the purpose of sealing and allowing the flow of fluids.



<u>Figure 4D:</u> Cuboid Fluid Air-Release, Fluid-Sealing Mechanism

Inventor's Handwritten Excerpts

The Birth of Glinttone[™] (c. 1988)

"Excerpt from notebook describing emotional trigger and original inspiration."

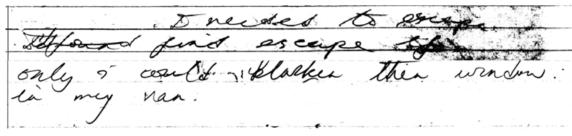


Figure 5A: Handwritten Excerpt – Emotional Motivation

Original page from the inventor's notebook, documenting the psychological and design impetus behind the invention. Shows early intent to merge visibility, emotion, and control into a physical interface.

The Inventor's Logic (c. 1988)

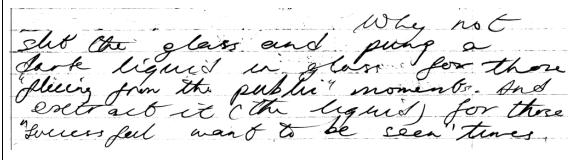


Figure 5B: Handwritten Excerpt – Practical Motivation

Inventor's Quotes Transcribed:

[&]quot;I needed to escape. I'd find escape if I could blacken the window in my van."

[&]quot;Why not slit the glass and pump a dark liquid in the glass for those fleeing-from-the-public moments. And extracted it (the liquid) for those successful-want-to-be-seen times."

ORIGINAL GLINTTONETM PROTOTYPE

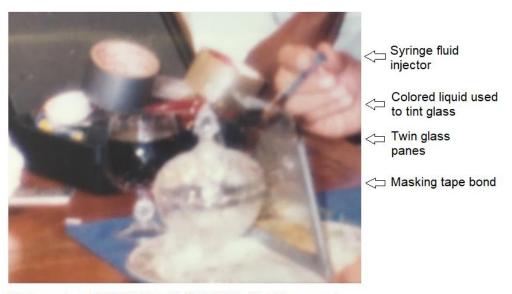


Photo courtesy DRIDON, LLC. (c) 1989-2025. All rights reserved.

Figure 6: Photograph of Early Prototype (April 13, 1989)

Assembled and demonstrated on April 13, 1989. Witnessed and signed by multiple parties on the same day.

Photograph taken during the first live demonstration of the **GlinttoneTM** prototype. The image shows the inventor observing closely while the prototype is being operated by a designated assembler and witness. The demonstration took place in Toronto, Canada on April 13, 1989, and was witnessed and signed off by multiple parties on the same day. This event marked the first verified activation of the manual liquid-modulation system.

Disclosure Statement:

Prototype demonstration on April 13, 1989, was signed and witnessed by multiple parties under confidentiality agreement. Names redacted for privacy reasons. Original documents with signatures are retained on file.

See Appendix 7A-B

Redacted Witness Confirmation – April 13, 1989

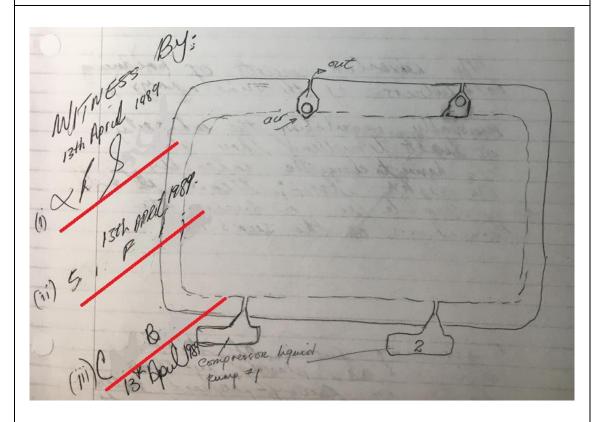


Figure 7A: Photograph of Redacted Witness Confirmation (April 13, 1989)

Scanned excerpt of the original witness documentation confirming the live prototype demonstration of the **Glinttone™** system. Names have been redacted, leaving initials, signature dates, and witness titles visible. Original documents with full details are retained on file by the inventor/owner.

Red lines indicate locations of signatories.

GLINTTONETM (1988)

Reaffirmation Letter from Original Witness (2025)

"This letter confirms that I witnessed the Liquid-Tinting (**Glinttone**TM) prototype demonstration on April 13, 1989, its inventor, and that I understood it to be confidential at the time..."

(Full letter on file; excerpt included with permission.)

Figure 7B: Reaffirmation Letter from Original Witness (2025)

A recent signed statement from one of the original 1989 witnesses, reaffirming their observation of the **Glinttone**TM prototype demonstration, identifying its inventor and the confidentiality agreement in place at the time. This document strengthens the historical and legal continuity of the invention's record.

Inventor's Notes & Discussions on Extended Applications

Scanned notes from 1989 outlining early envisioned applications for GlinttoneTM, including auto theft and burglary prevention. Inventor also discussed applications in architecture (residential and commercial buildings), and other uses with witnesses.

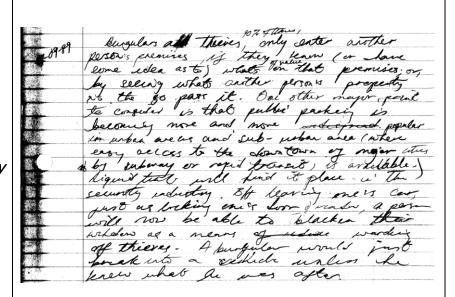


Figure 8: Example of Expanded Applications for GlinttoneTM

The Inventor Thinks Ahead About Succession (August 28, 1989)

A personal message written at the time, contextualizing the invention as both a technical and emotional milestone:

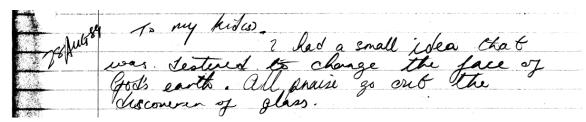


Figure 9: Note to Future Children (August 28, 1989)

Transcribed: "I had a small idea that was destined to change the face of God's Earth. All praise[s] go out to the discoverer of glass."

Glass Pane Air Flow ↑↓ Air Outlet Air Outlet (Ball Valve) (Ball Valve) Liquid Chamber (Vacuole) Liquid Flow ↑↓

A MODERN SCHEMATIC OF GLINTTONETM (1988)

Figure 10: GlinttoneTM Liquid Modulation Assembly Diagram

Fluid Inlet/Outlet 2

(Pump-in / Suction-out)

Glinttone (1988)

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This diagram illustrates the core structural and functional elements of the GlinttoneTM liquid-based light modulation system for transparent surfaces. It shows a side-sectional view of two adjacent glass panes forming a sealed panel, with an internal vacuole (liquid chamber) between them. The vacuole is designed to be filled or emptied of an optically dense liquid to modulate transparency.

Key components include:

Fluid Inlet/Outlet 1

(Pump-in / Suction-out)

- Glass Pane: Two adjacent glass panes depicted as a rounded rectangle forming the outer boundary of the assembly.
- **Liquid Chamber (Vacuole):** A sealed internal cavity where the liquid is pumped in or out to adjust tint levels.
- Fluid Inlet/Outlet Vessels: Tubes connected at the bottom of the assembly that enable liquid pumping in (injection) or out (suction) of the vacuole.
- Rotated Hexagonal Ball-Valve Chambers: Two small chambers near the top front (anterior) edge of the vacuole, each containing a ball valve that seals air outlets.

- Ball Valves: Spherical components inside the hexagonal chambers that float to seal air outlets when the vacuole fills with liquid, preventing air escape and ensuring a complete liquid fill for maximum tint.
- Air Outlets: Paths from the top of the hex chambers to the exterior of the glass panel, allowing air to escape during liquid filling, which are sealed by the ball valves when fully engaged.

The diagram also depicts flow directions for liquid (blue arrows and dotted lines) and air (red arrows and dotted lines), illustrating how liquid is pumped into the vacuole (dashed blue line), displacing air which exits through the ball-valve air outlets. When filled, the ball valves seal the outlets to maintain the liquid fill, achieving the desired tint level. Reversing the process pumps the liquid out, restoring full transparency.

Historical Context / Blog

The GlinttoneTM spans over three decades of innovation in dynamic light control. The concept traces its origins to Canada, where the original GlinttoneTM (1988) was developed and prototyped.⁴

Glinttone™ (1988): Liquid-Based Modulation

The original GlinttoneTM (1988) pioneered the use of liquid-based tinting media to modulate light transmission. It operated by manipulating the optical properties of controlled fluid layers — such as color saturation or refractive index — to produce transitions in transparency.

Selecting the ideal final liquid proved a significant challenge. The medium had to maintain optical clarity, thermal stability, and appropriate viscosity, while resisting degradation over time. In practice, the system faced several physical and operational limitations:

- Condensation would form between layers, especially under thermal cycling, degrading visibility.
- The meniscus effect caused liquid edges to cling to the glass surface, distorting light and interfering with uniform modulation.
- Material changes were required to adjust the optical state, leading to slower response times and increased mechanical complexity.

While groundbreaking for its time, the approach lacked the responsiveness, scalability, and reliability needed for modern, high-performance applications — but it laid the

⁴ Originally developed in **1988** and **prototyped in 1989** in **Canada**, GlinttoneTM (1988) pioneered the use of liquid-based tinting media to modulate light.

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conceptual foundation for the **GlinttoneTM Series** and any substantially similar works that followed.

Brand Messaging

The Moment Is Primed. The Future Is GlinttoneTM. *Intelligent, adaptive glass for an adaptive world*. Where Optics Meet Intelligence

Visit: www.glinttone.com

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