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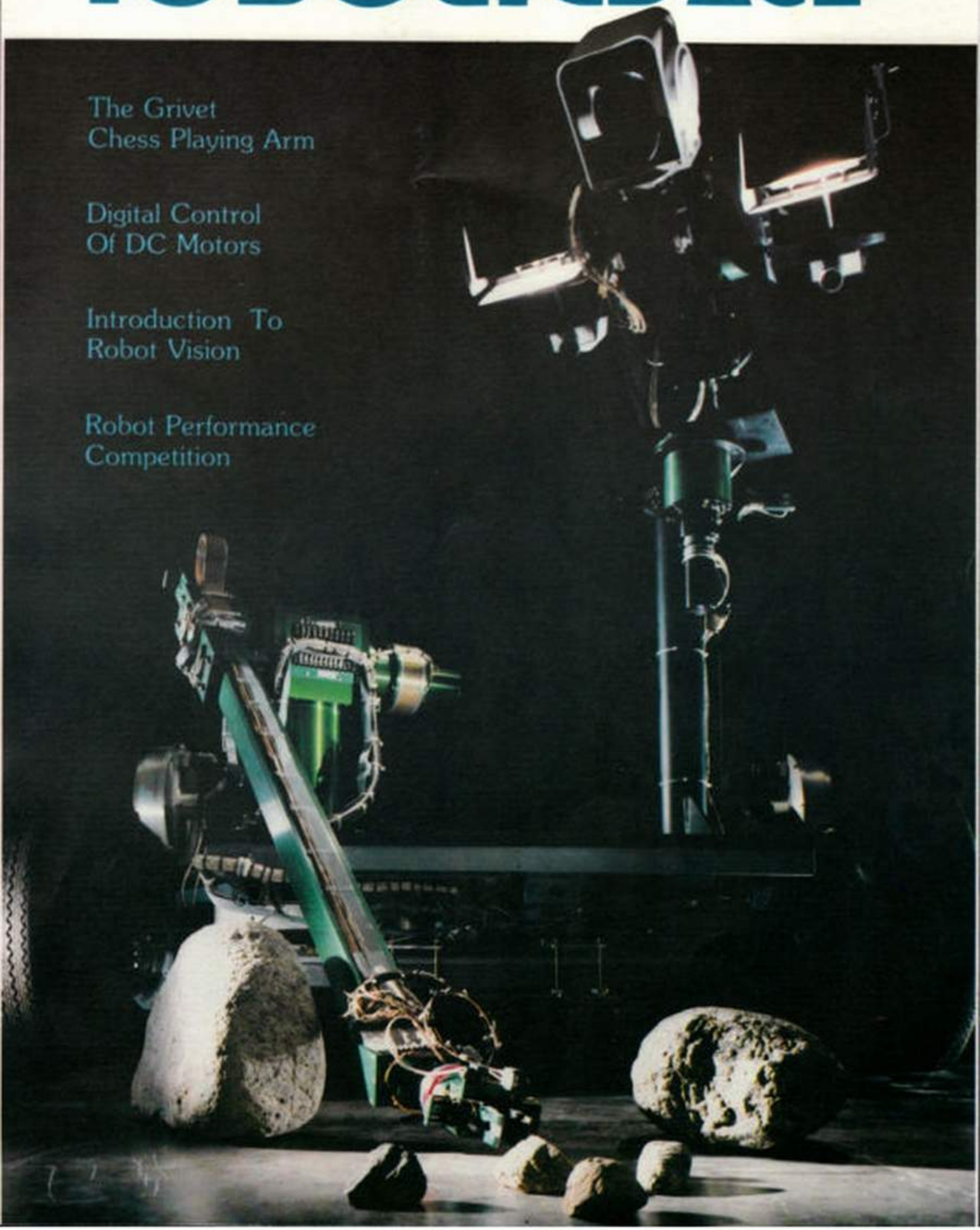

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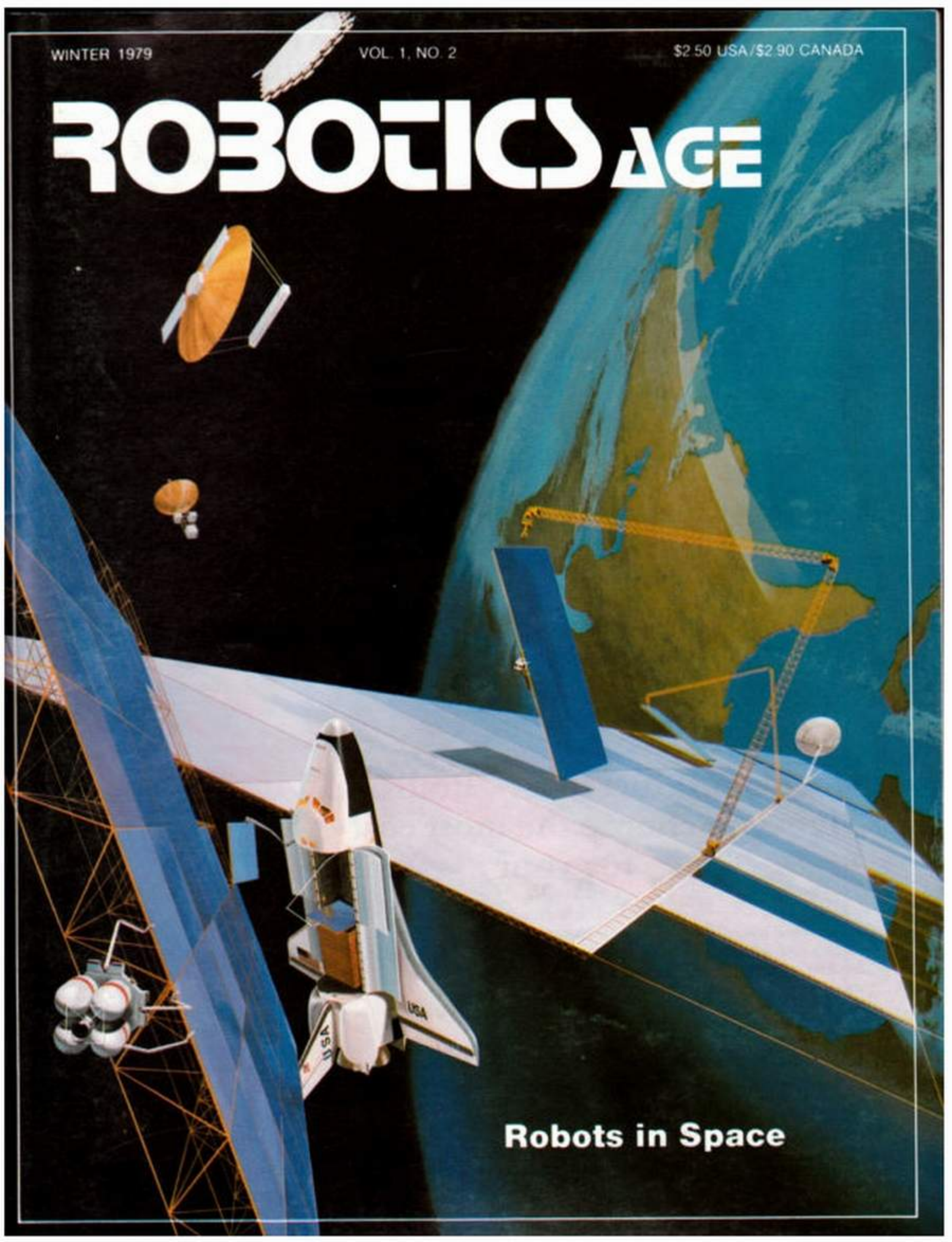

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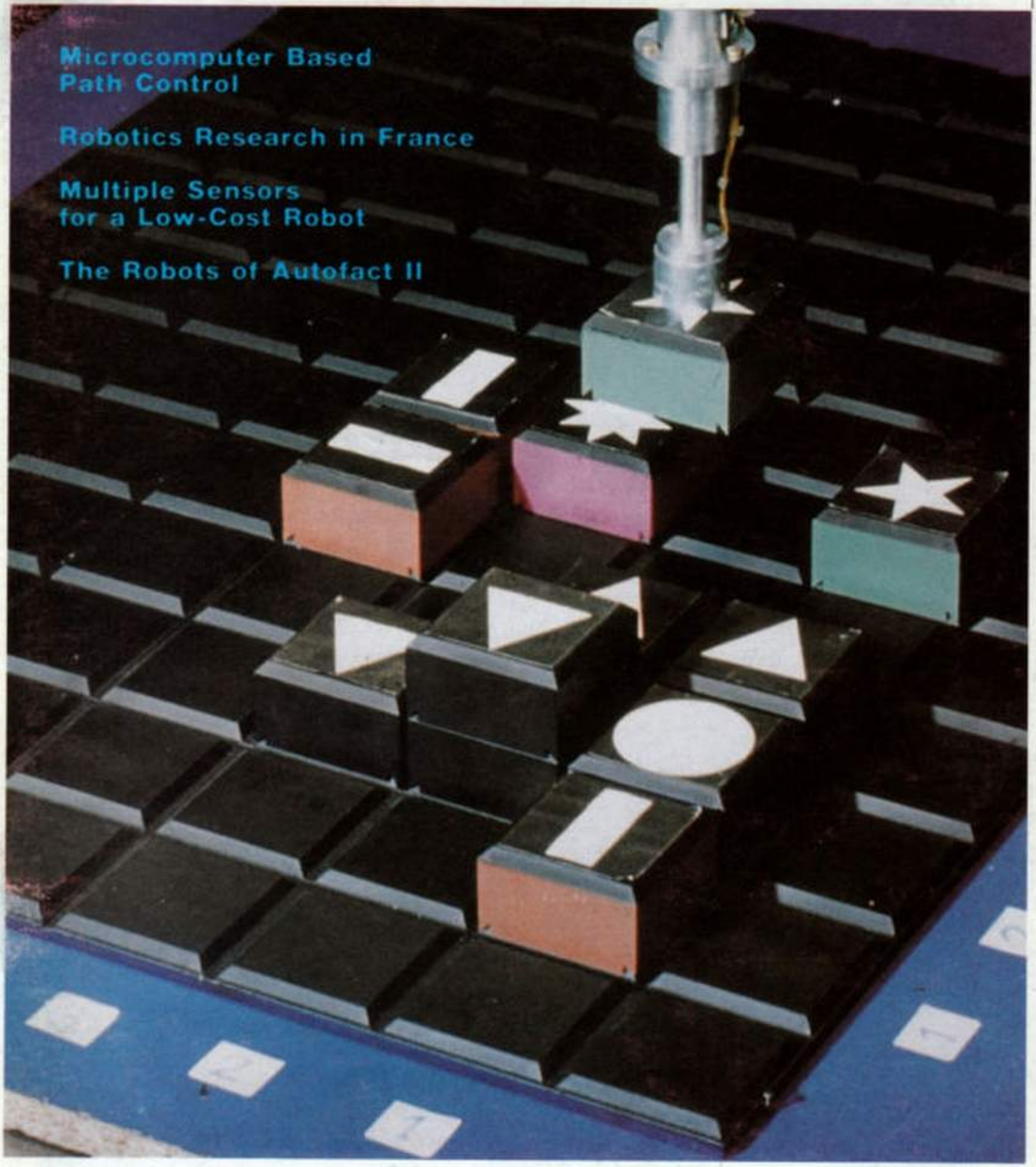

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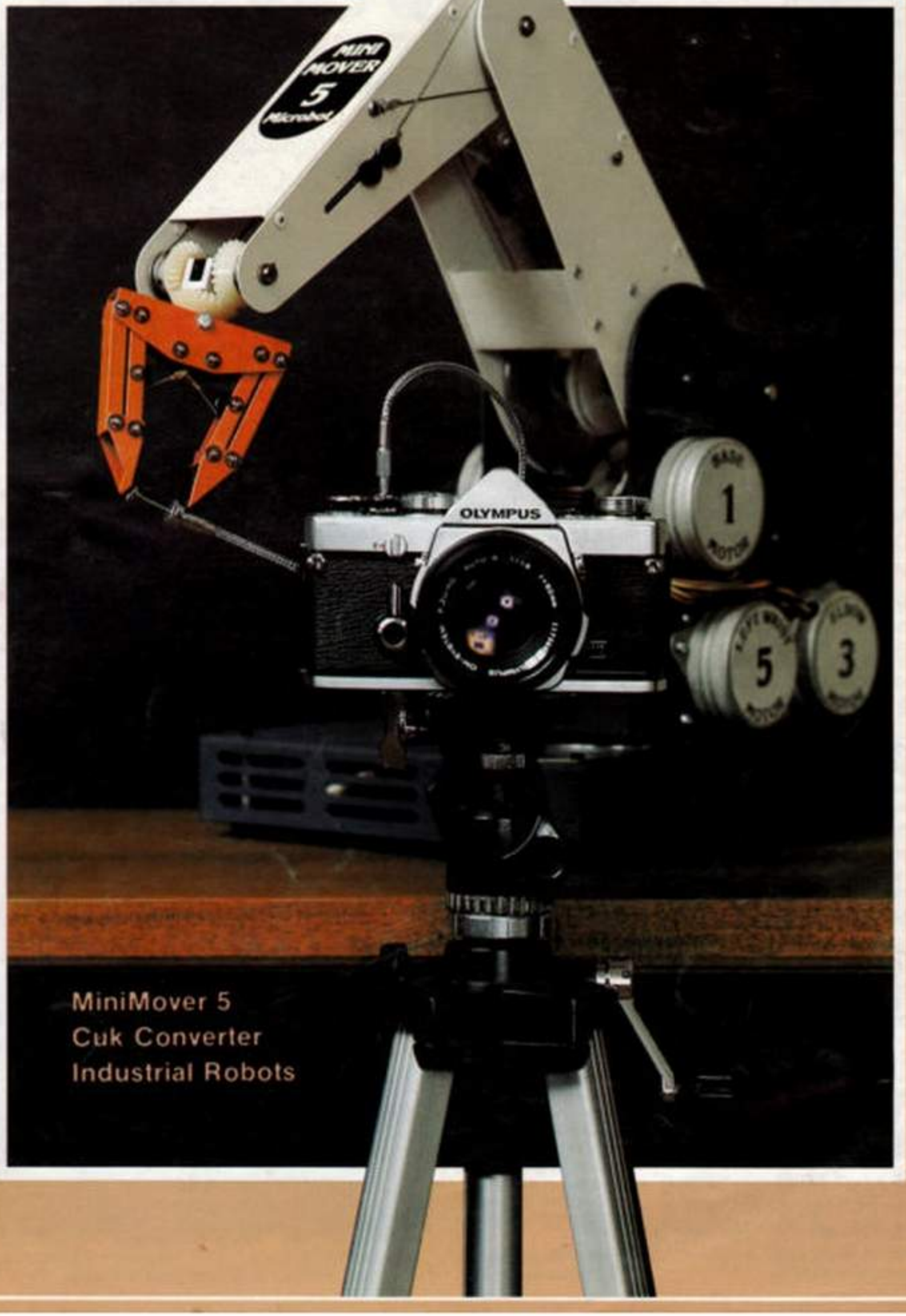

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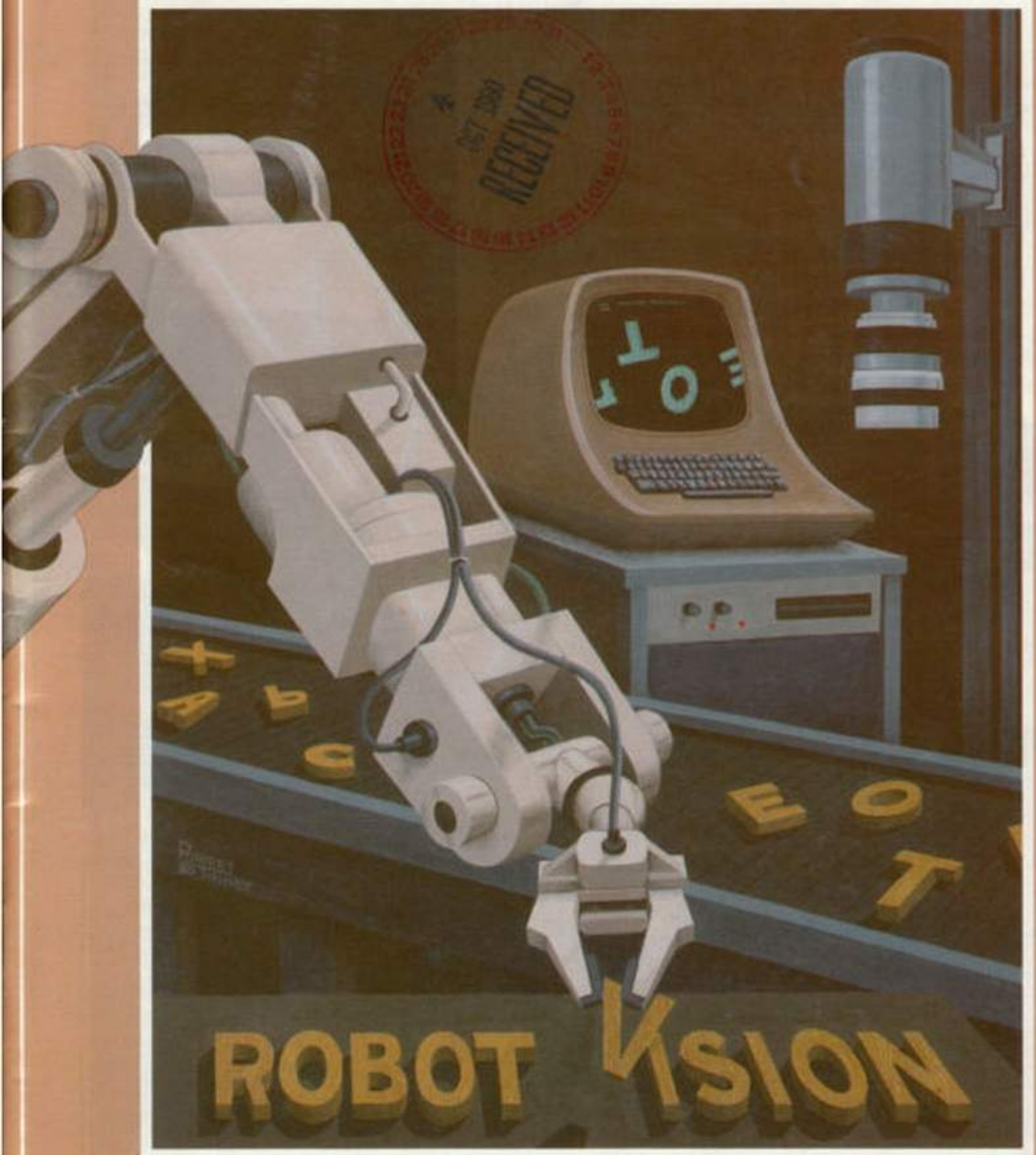

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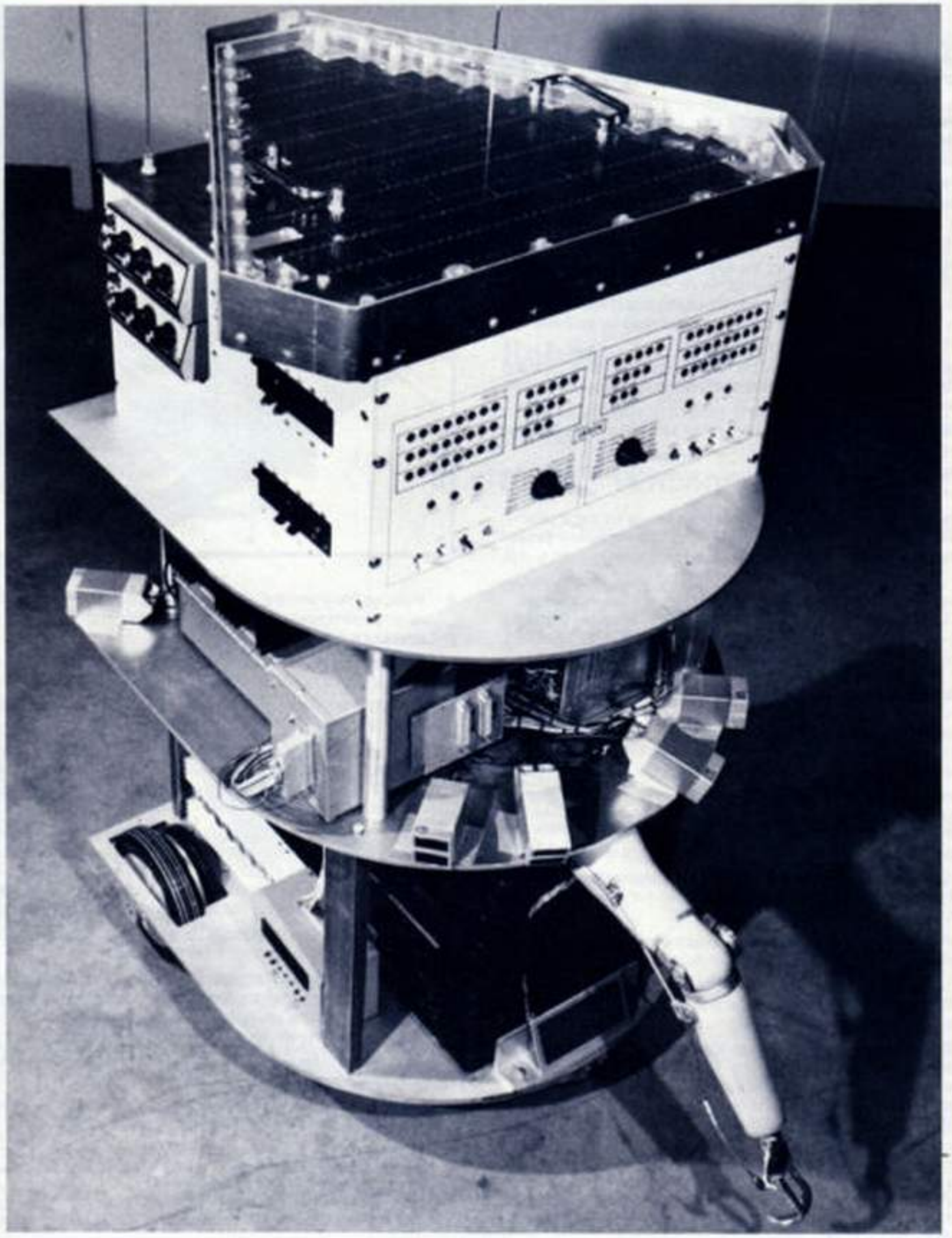

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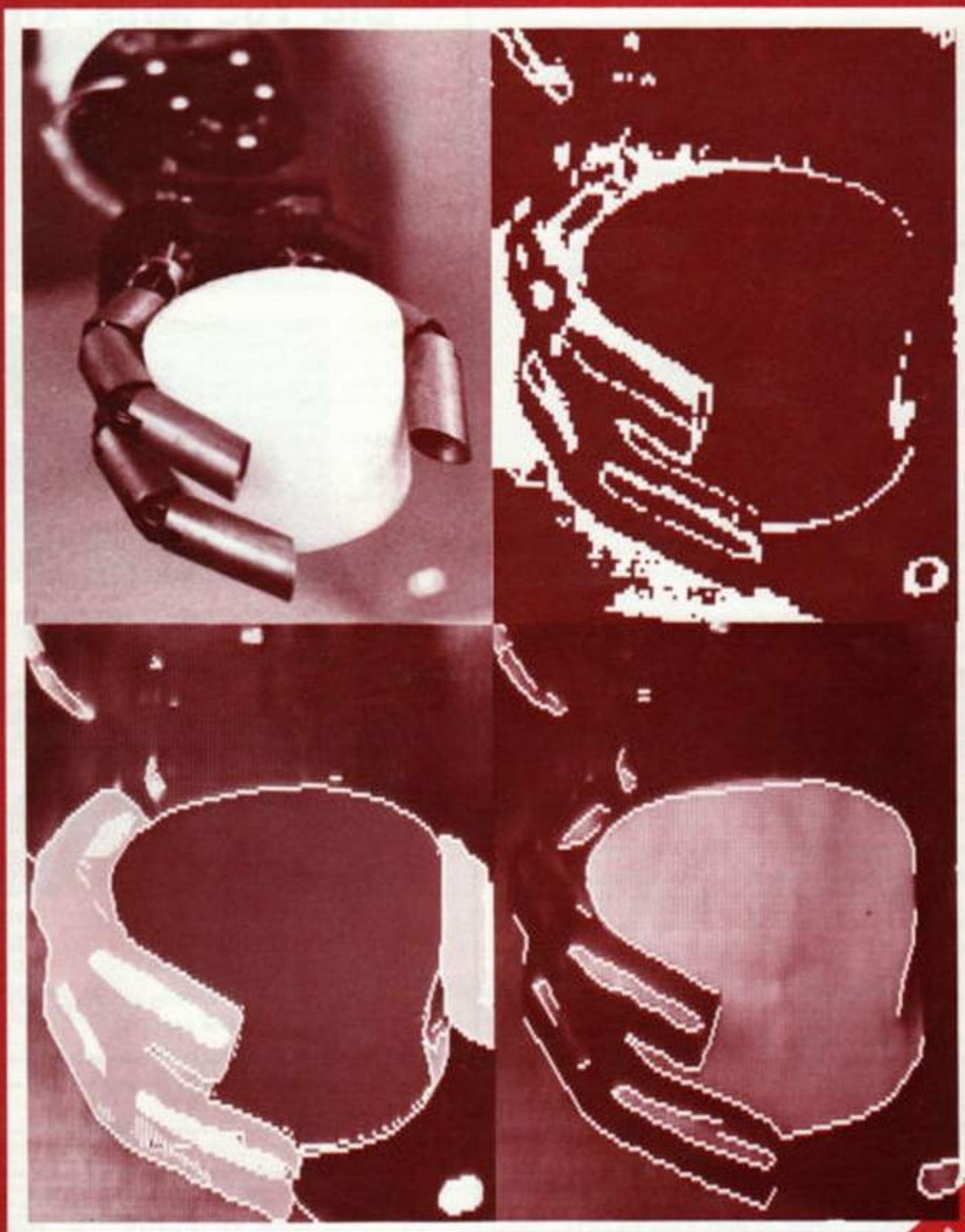

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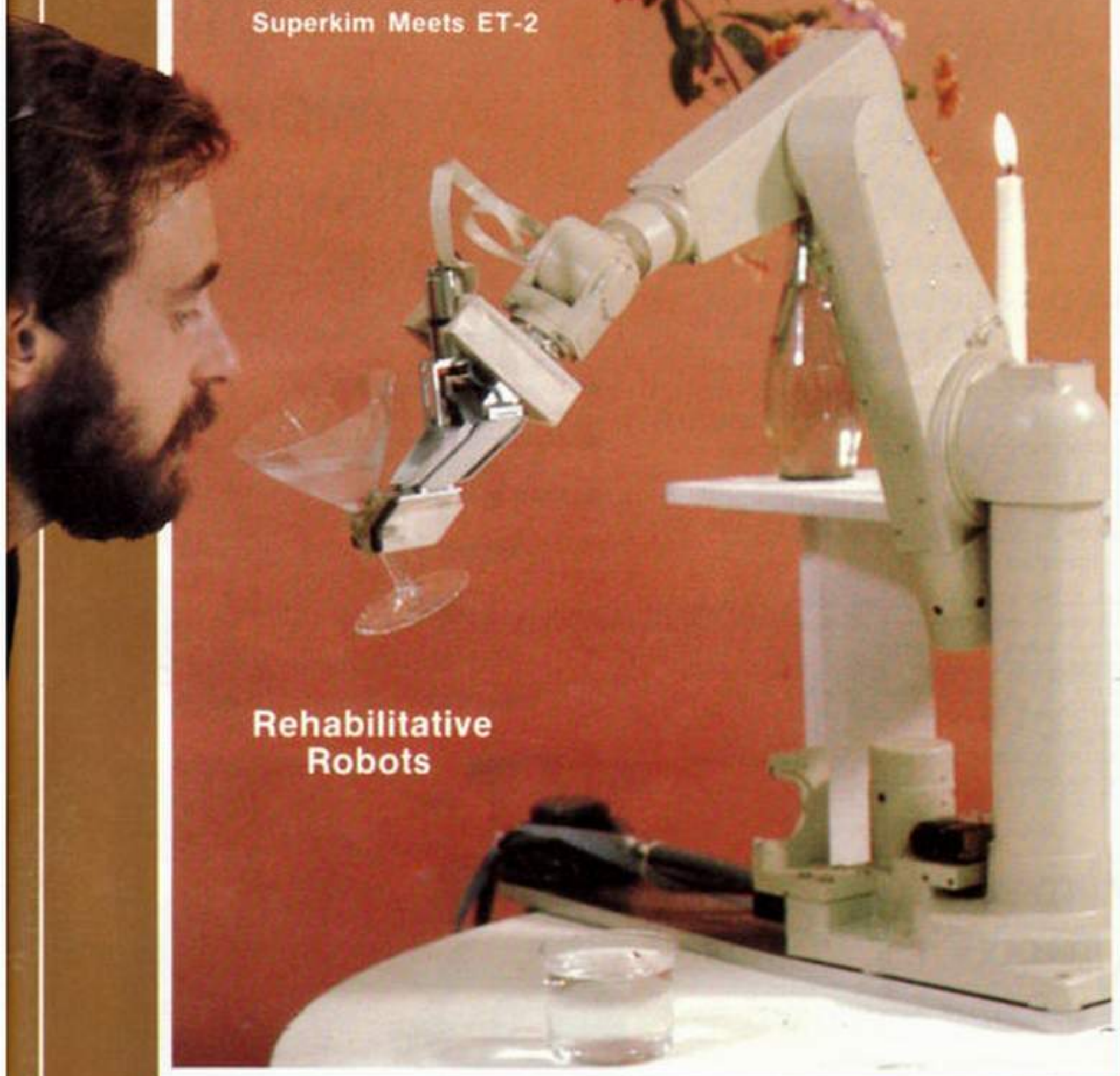

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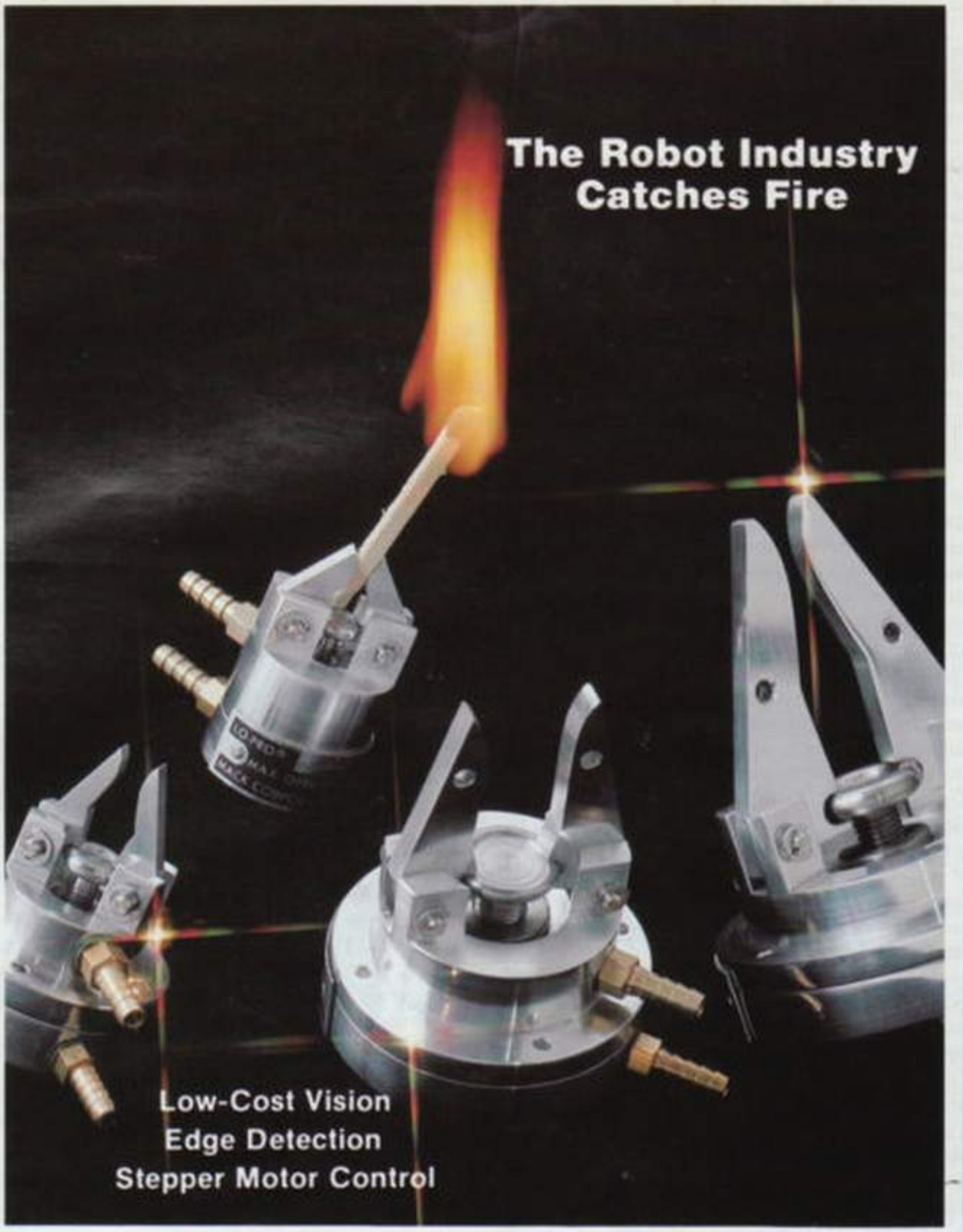

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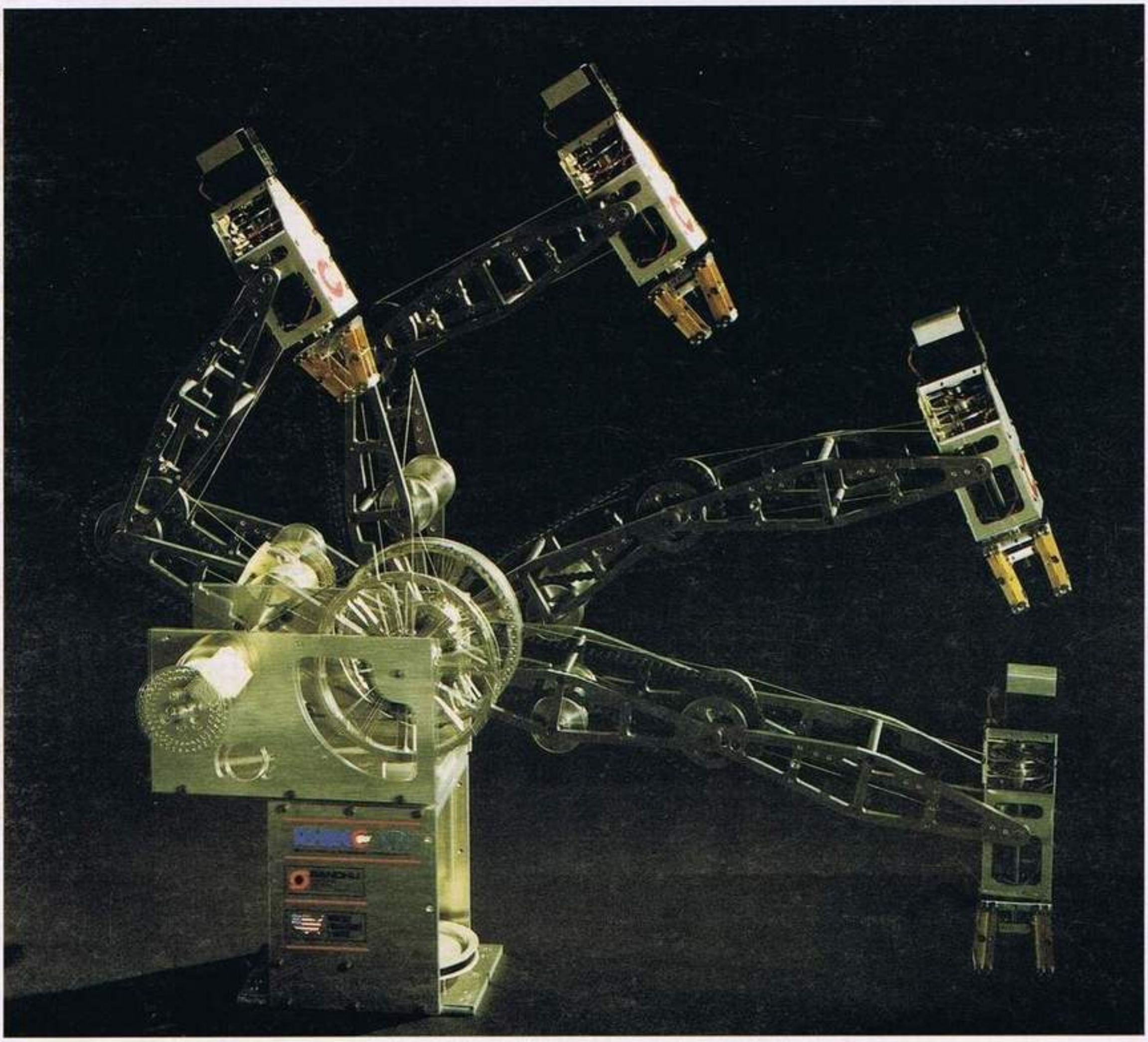

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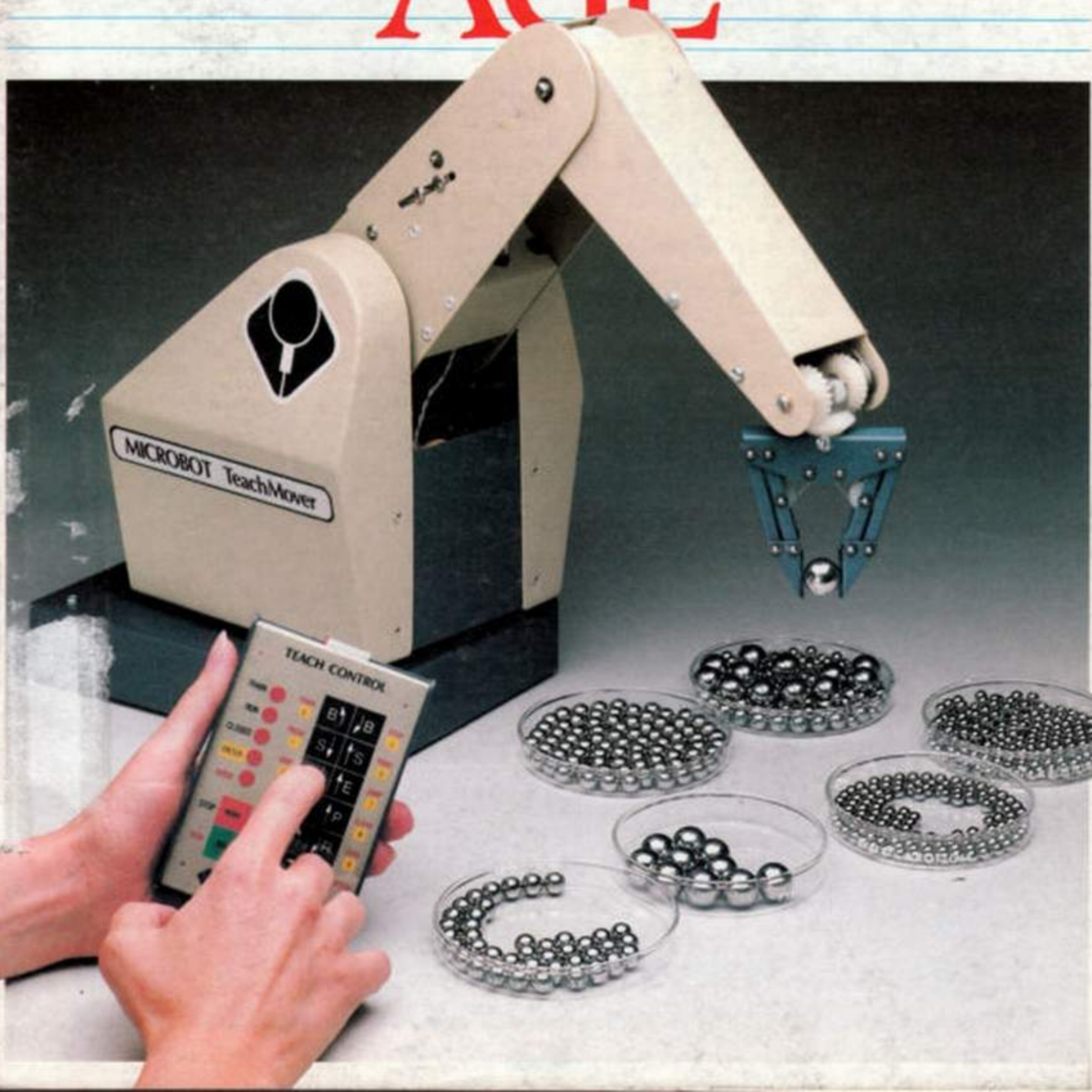

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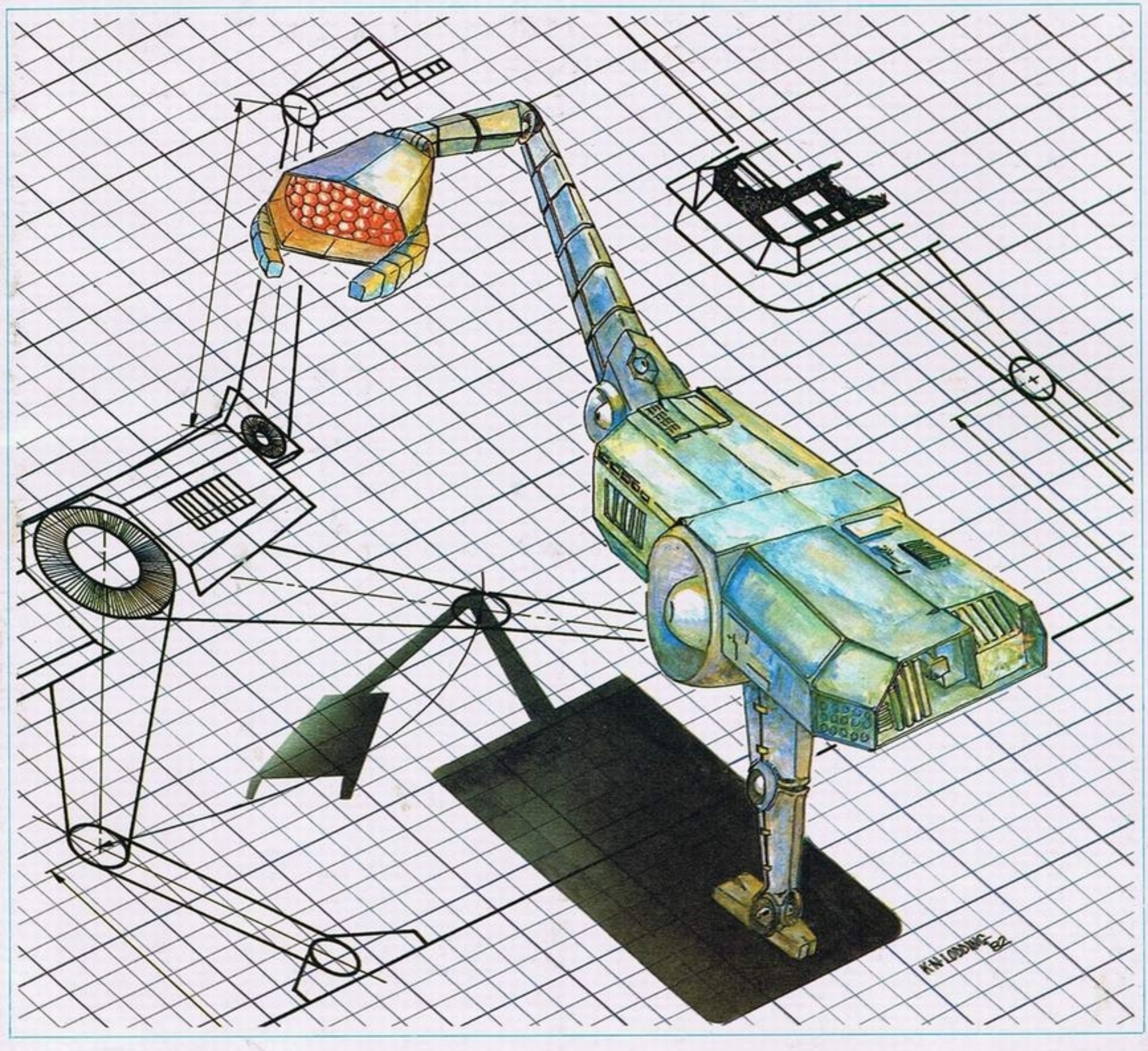

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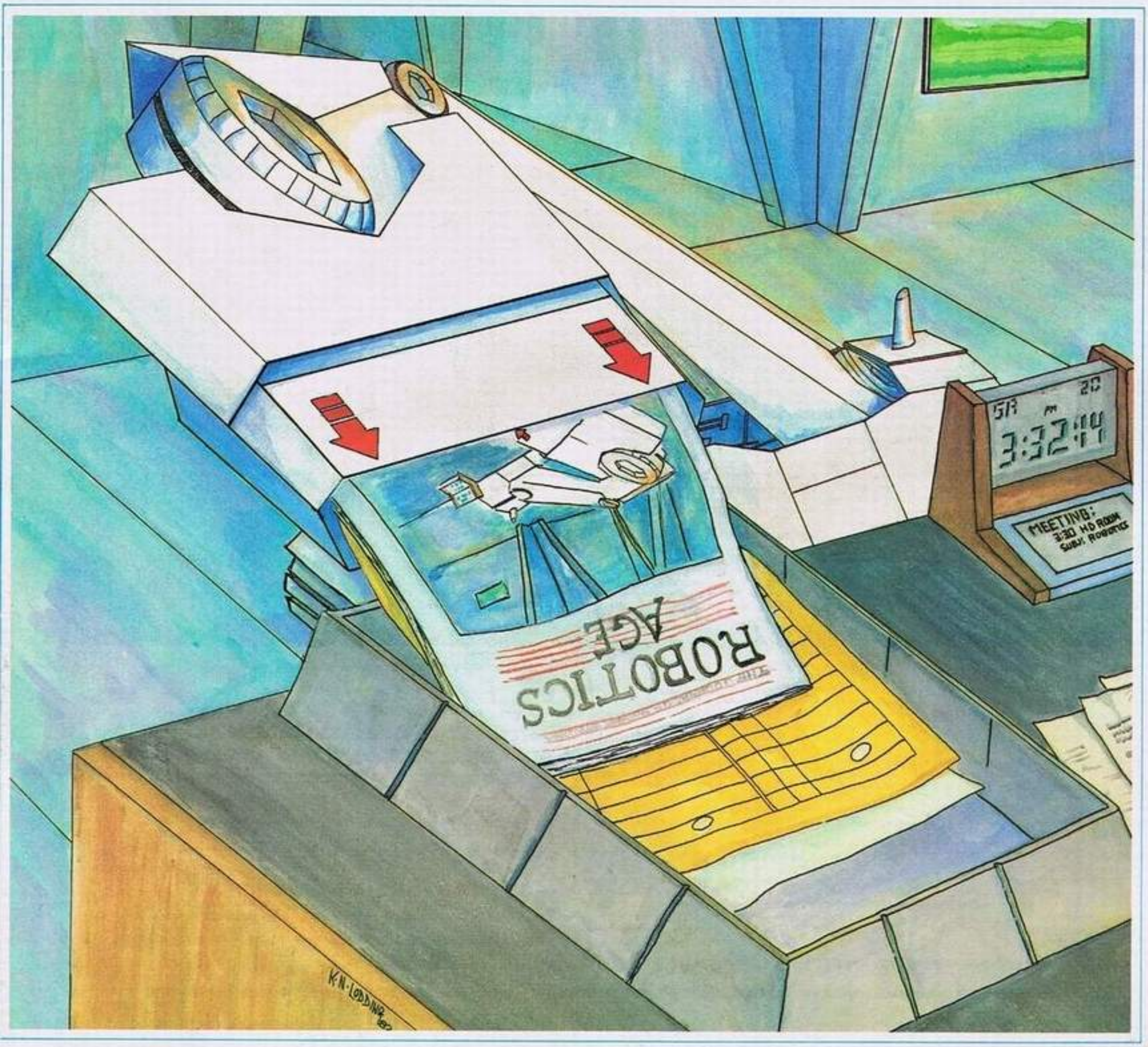

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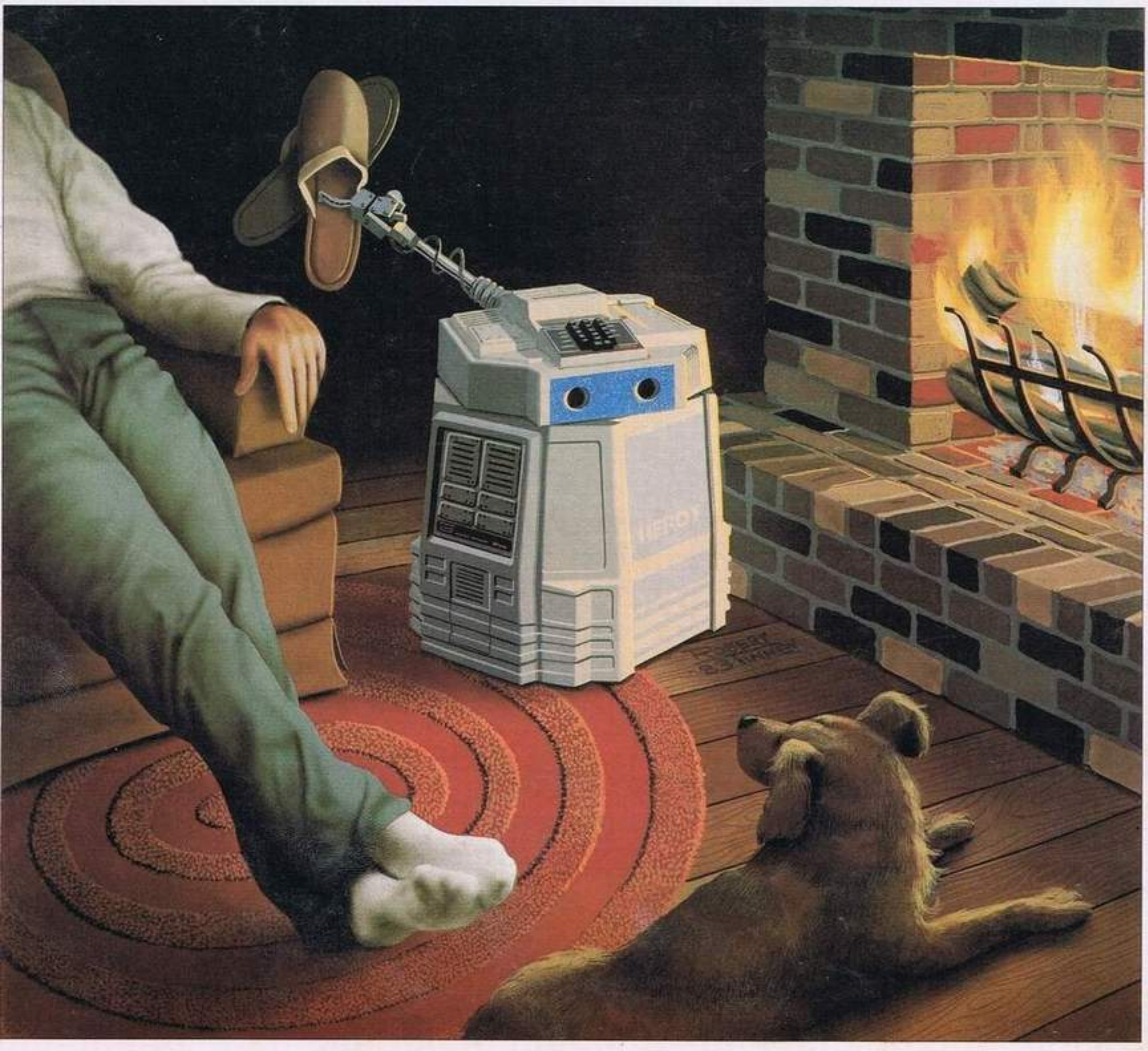

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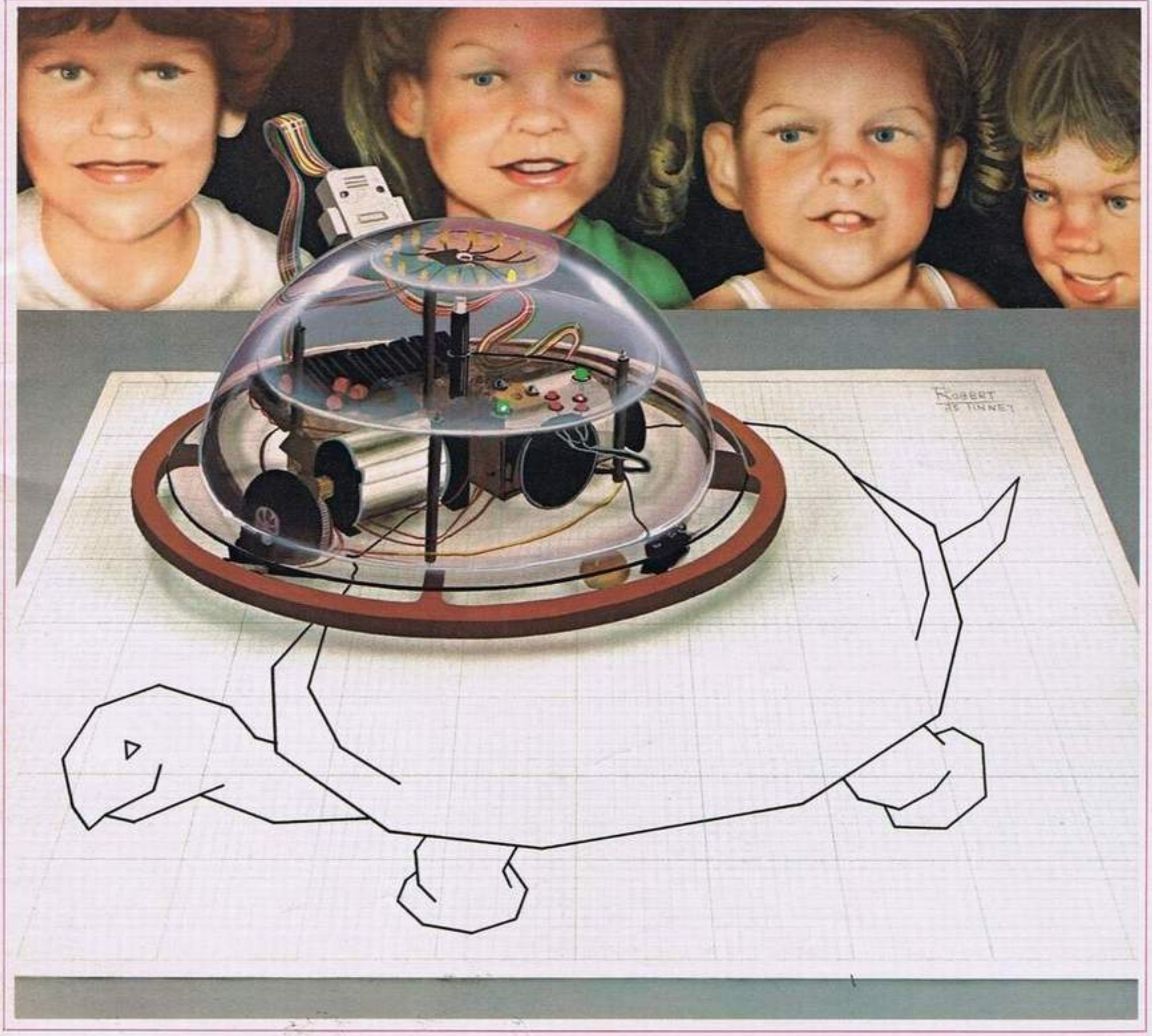

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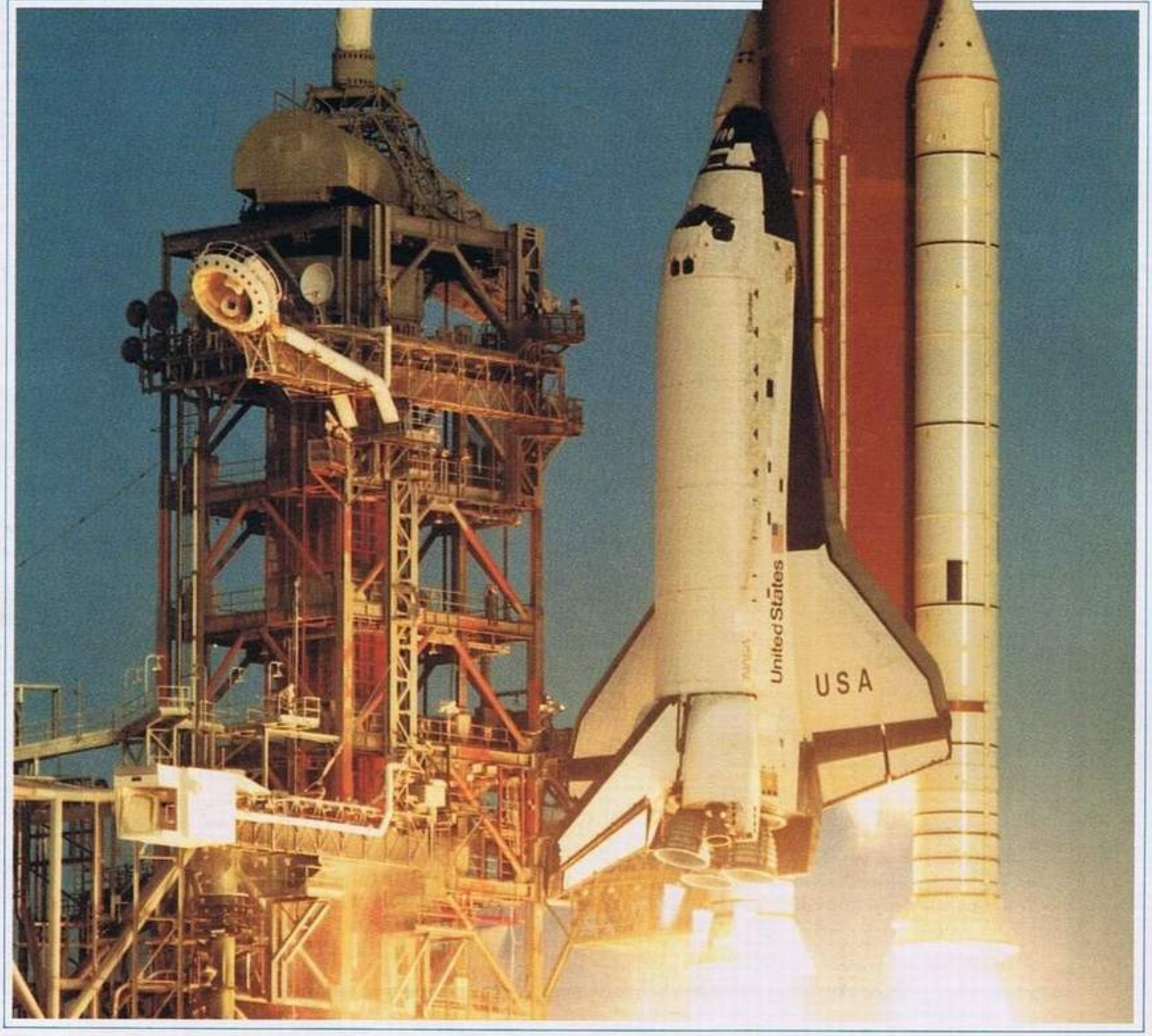

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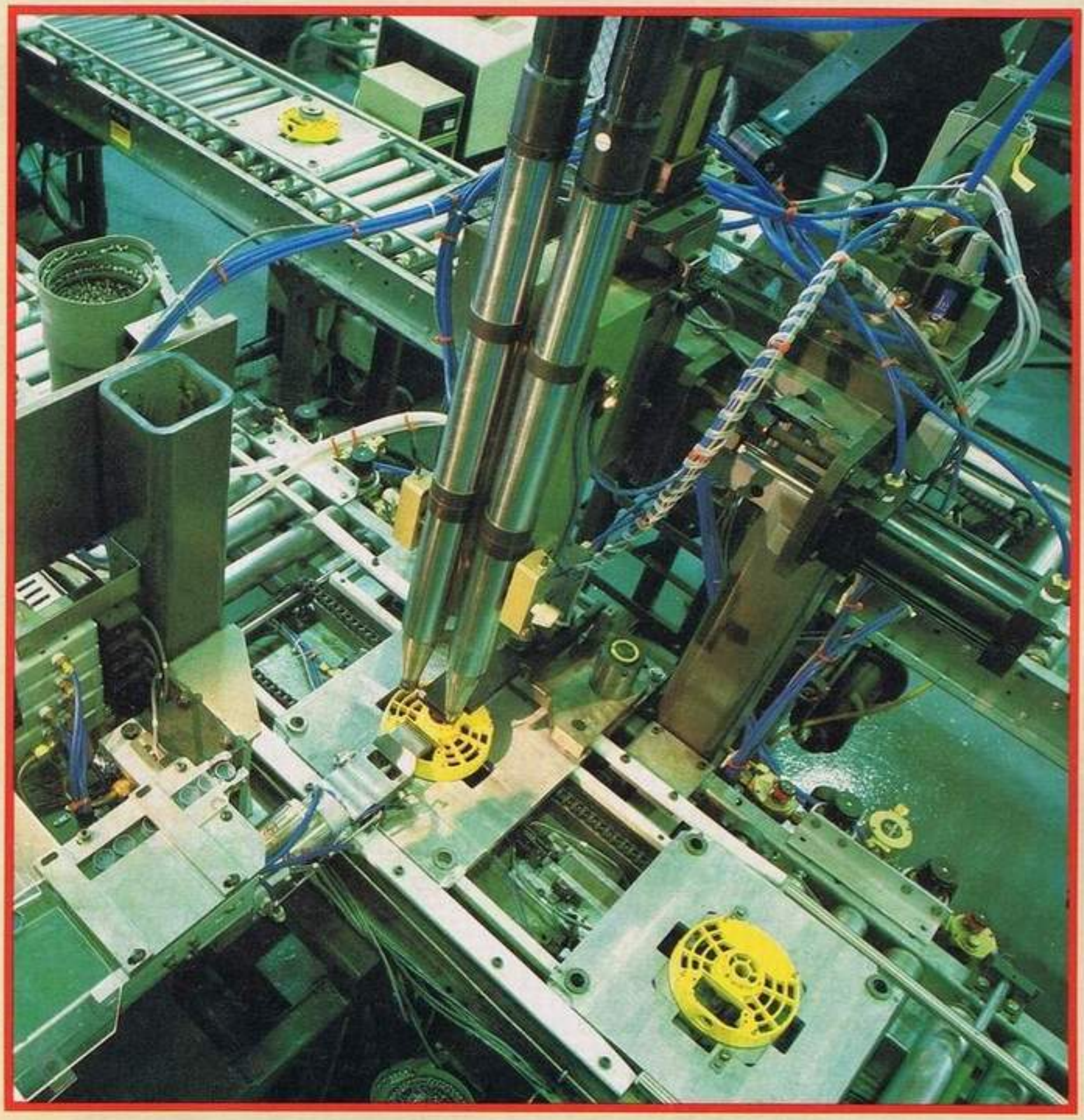

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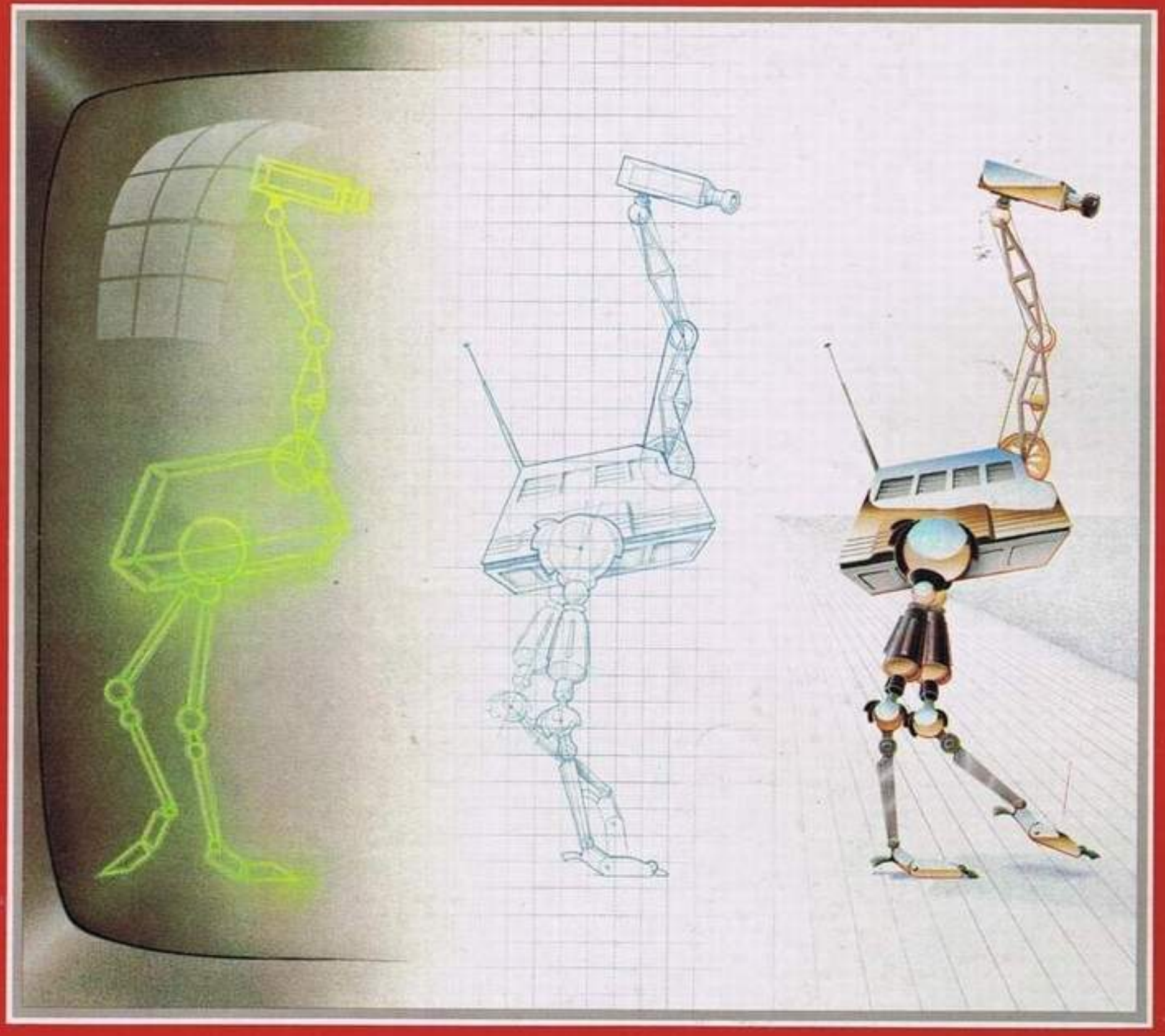

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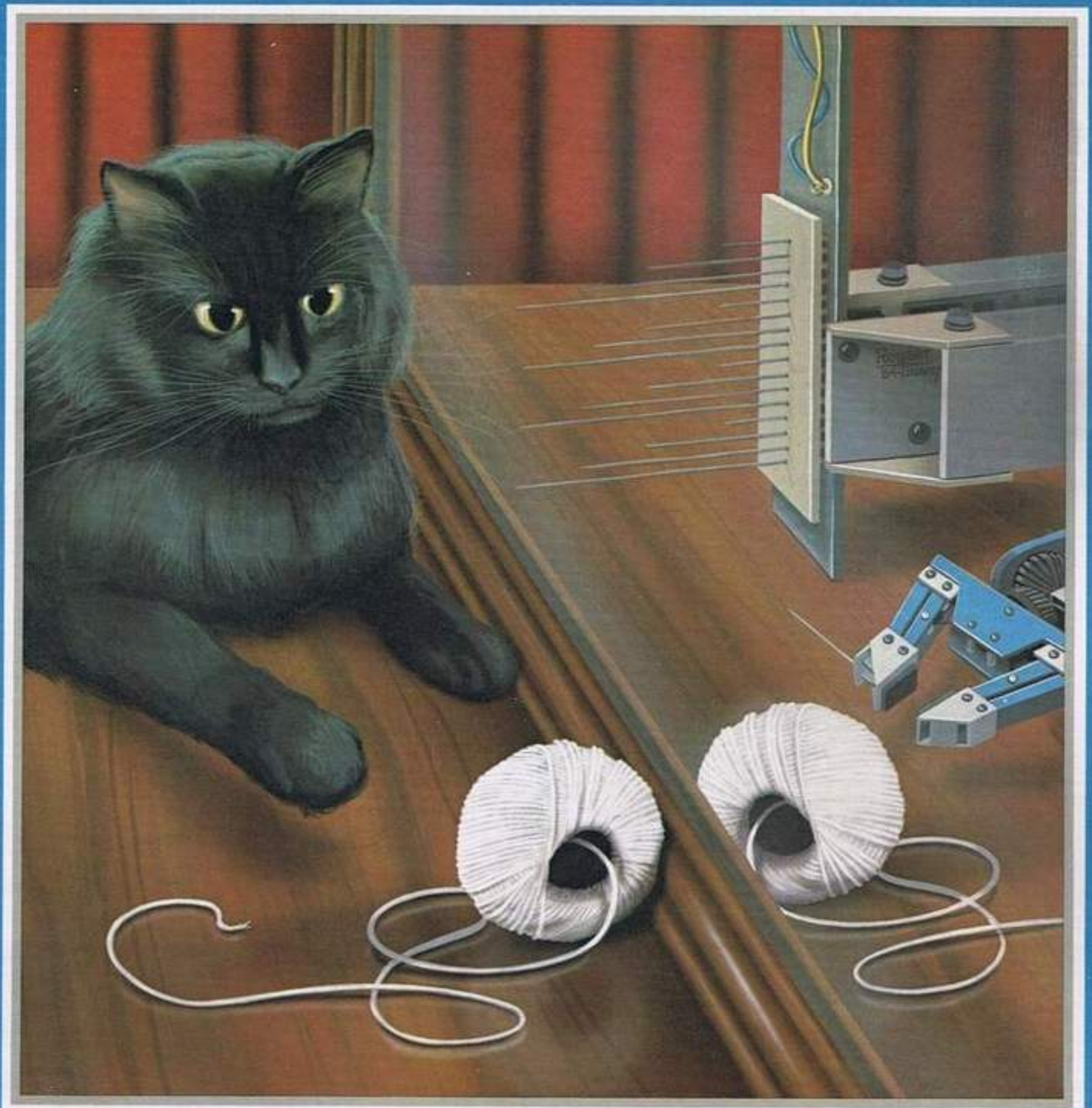

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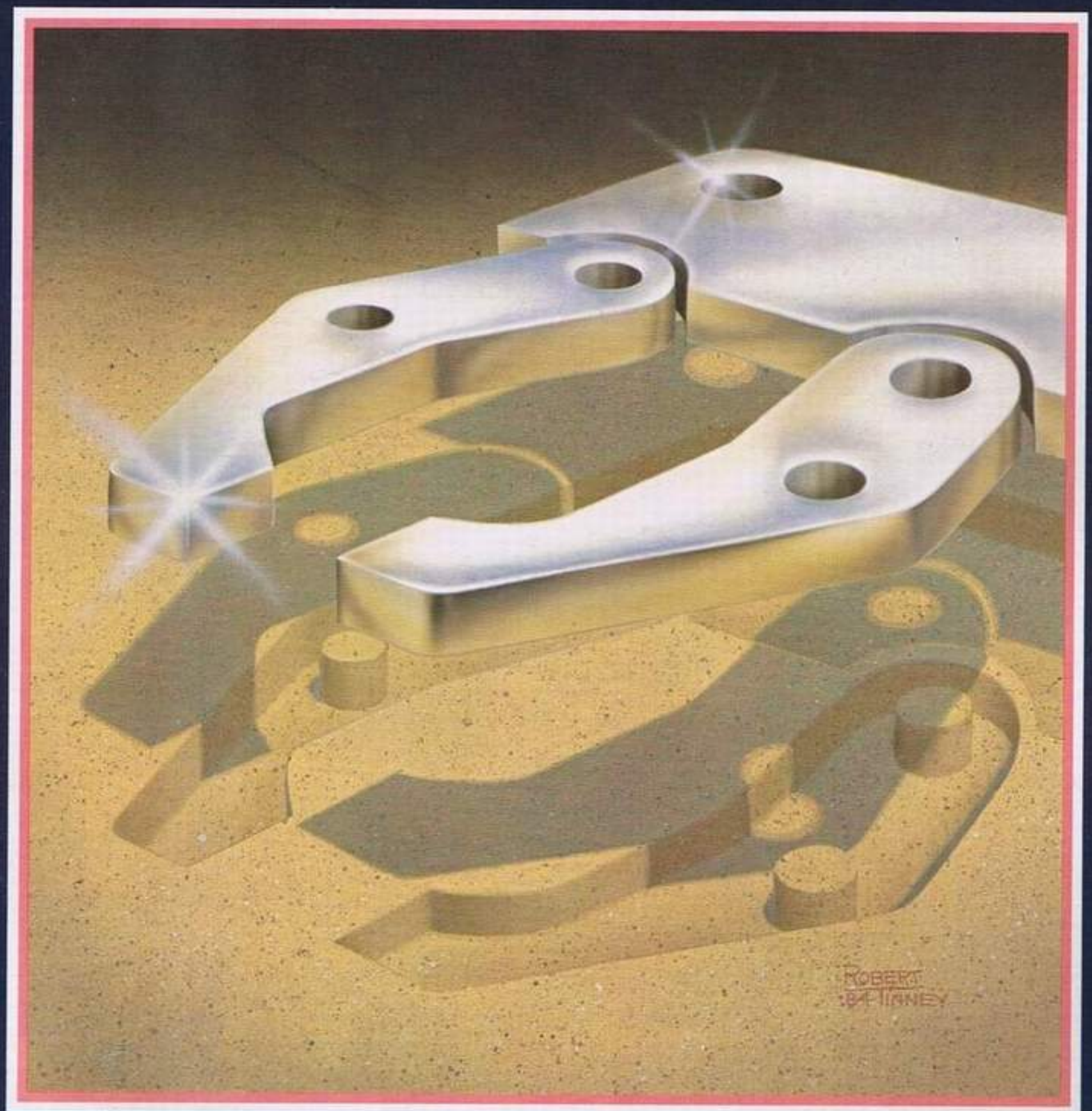

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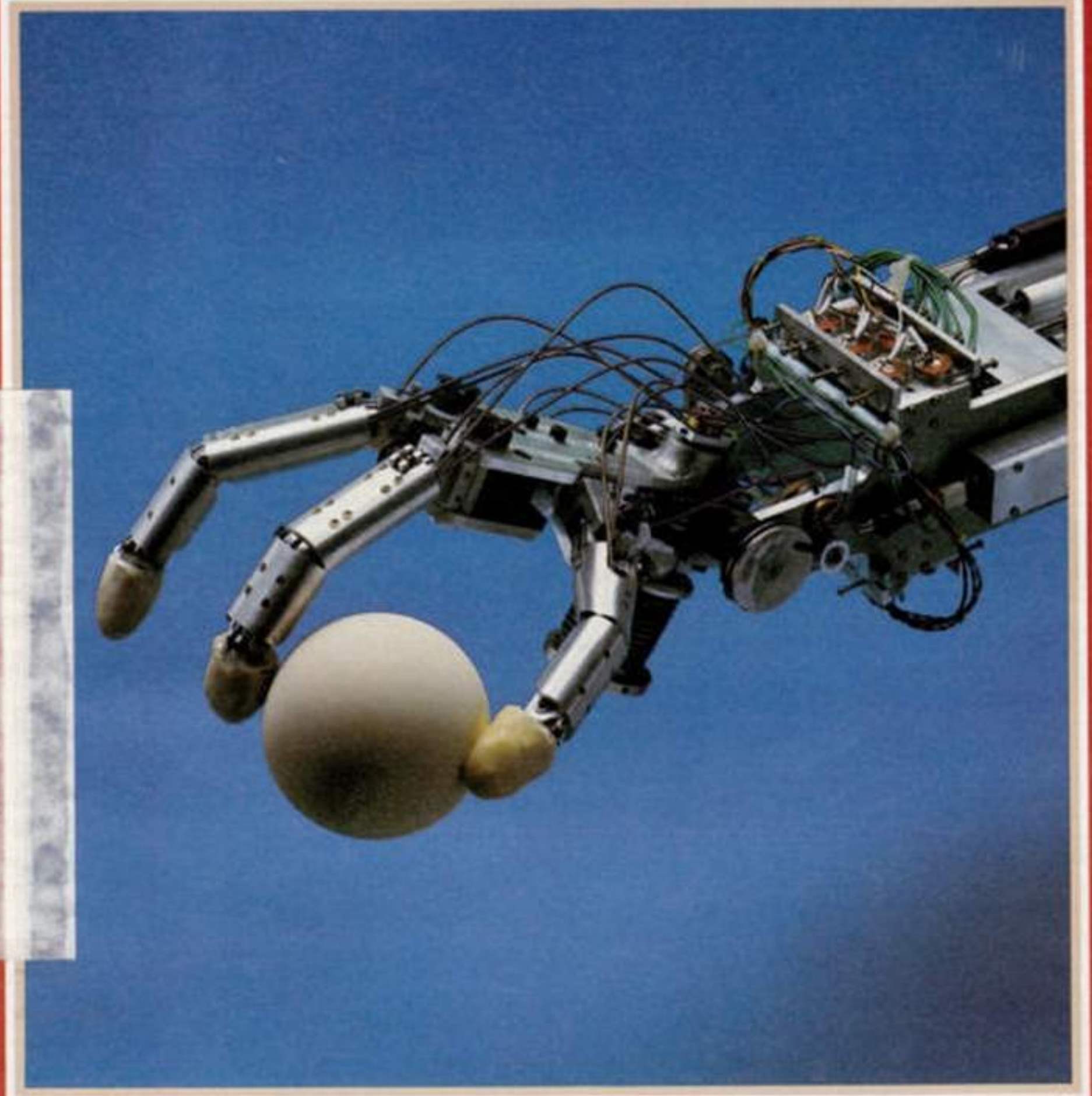

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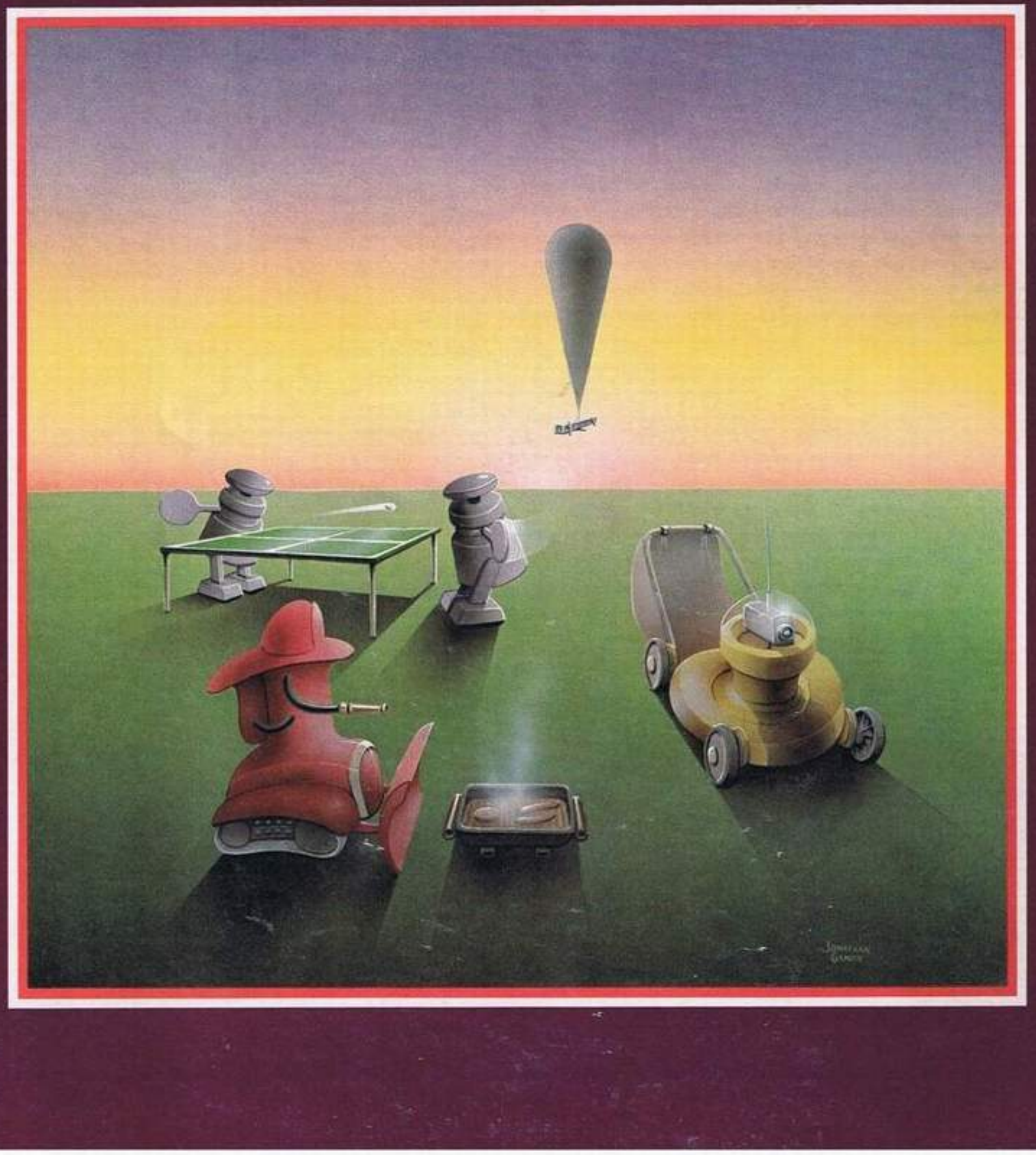

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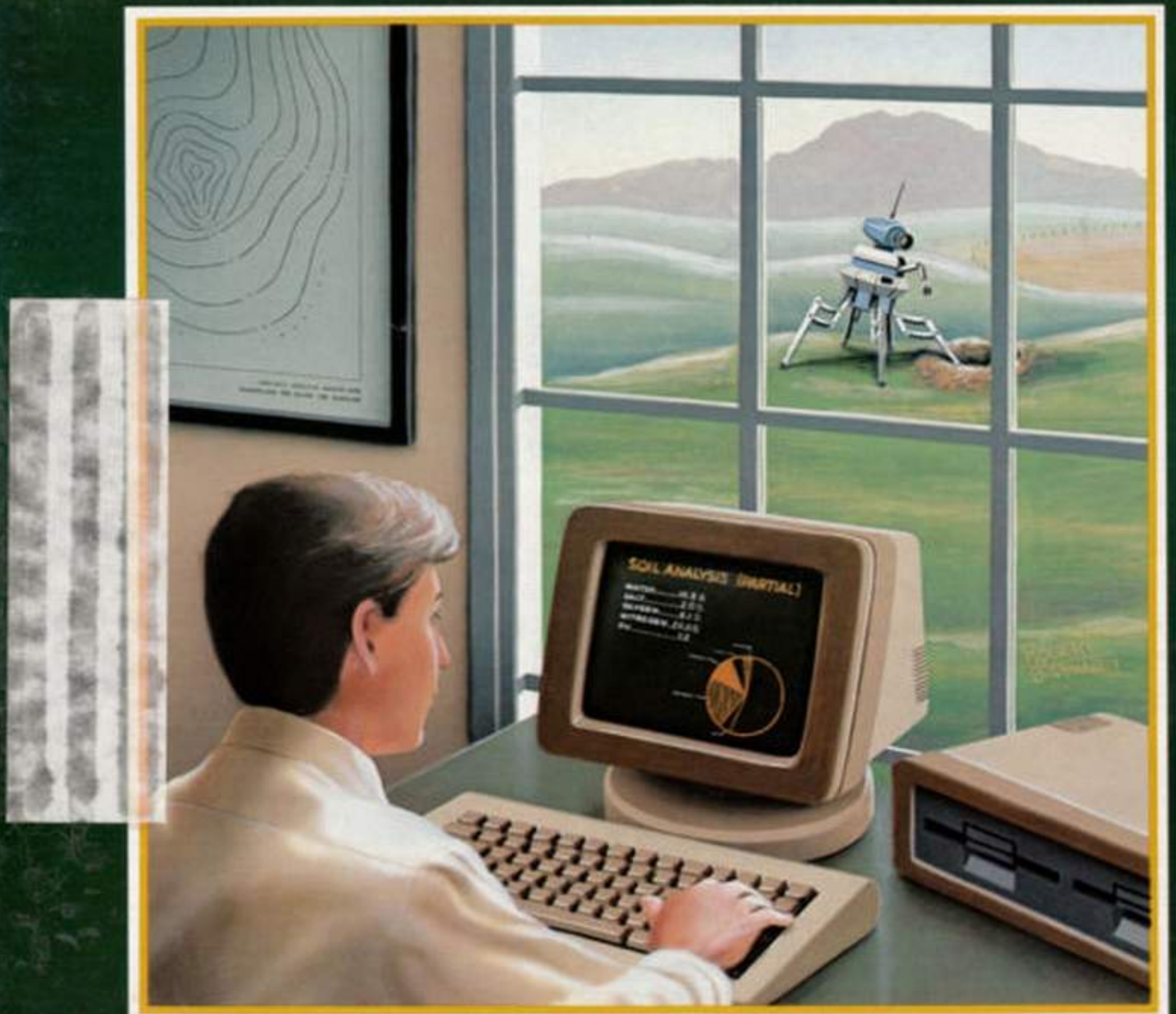

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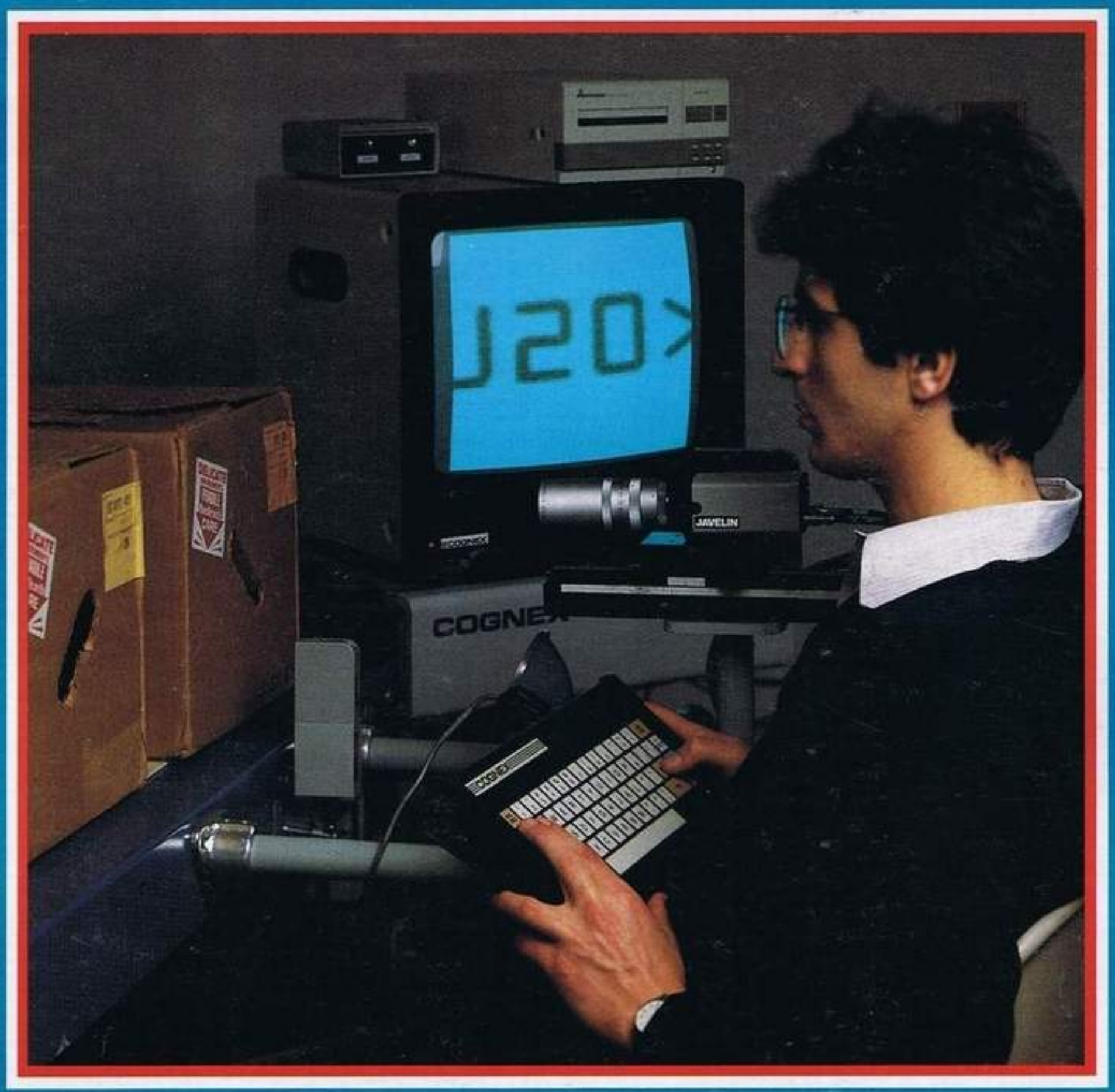

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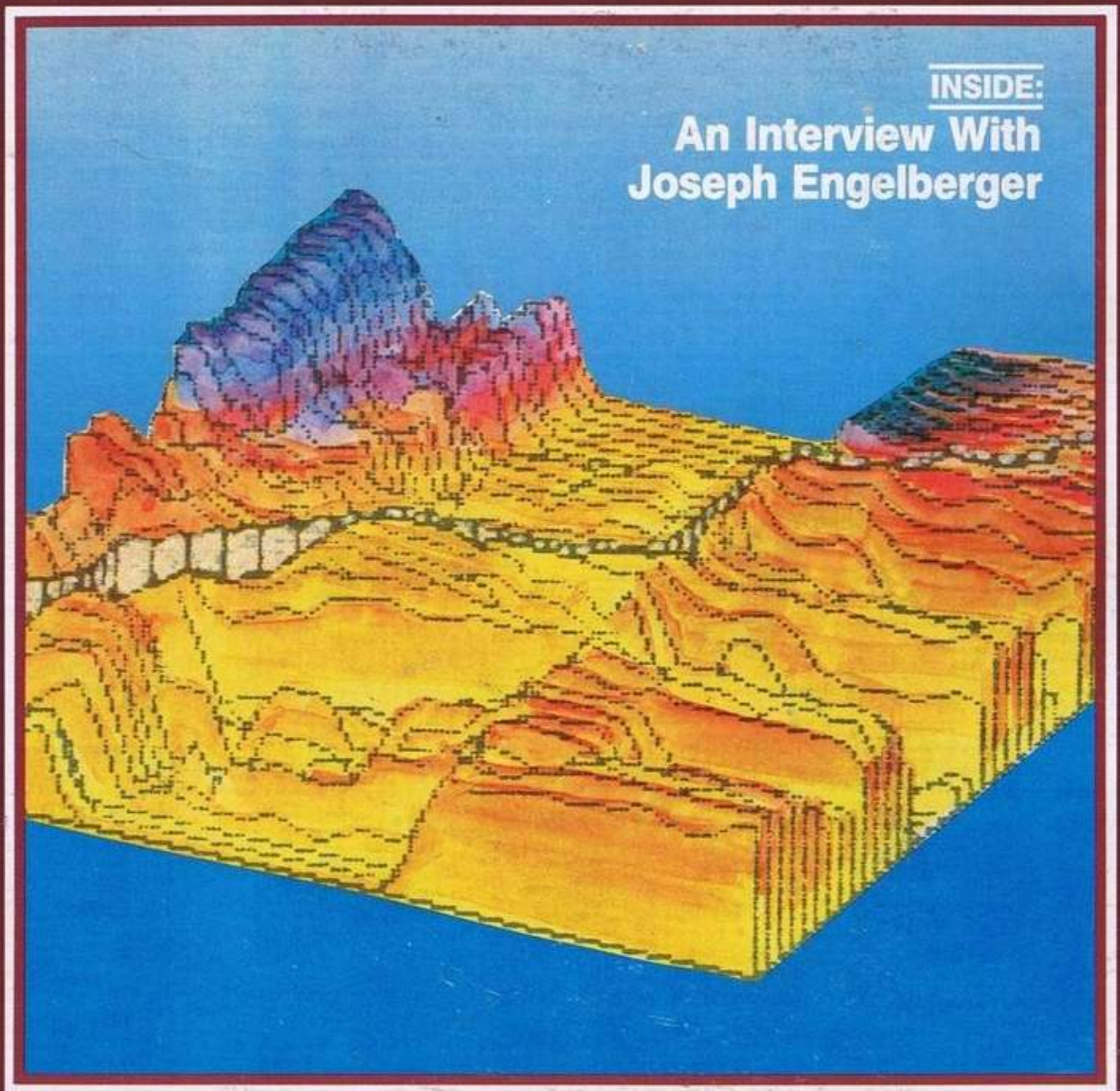

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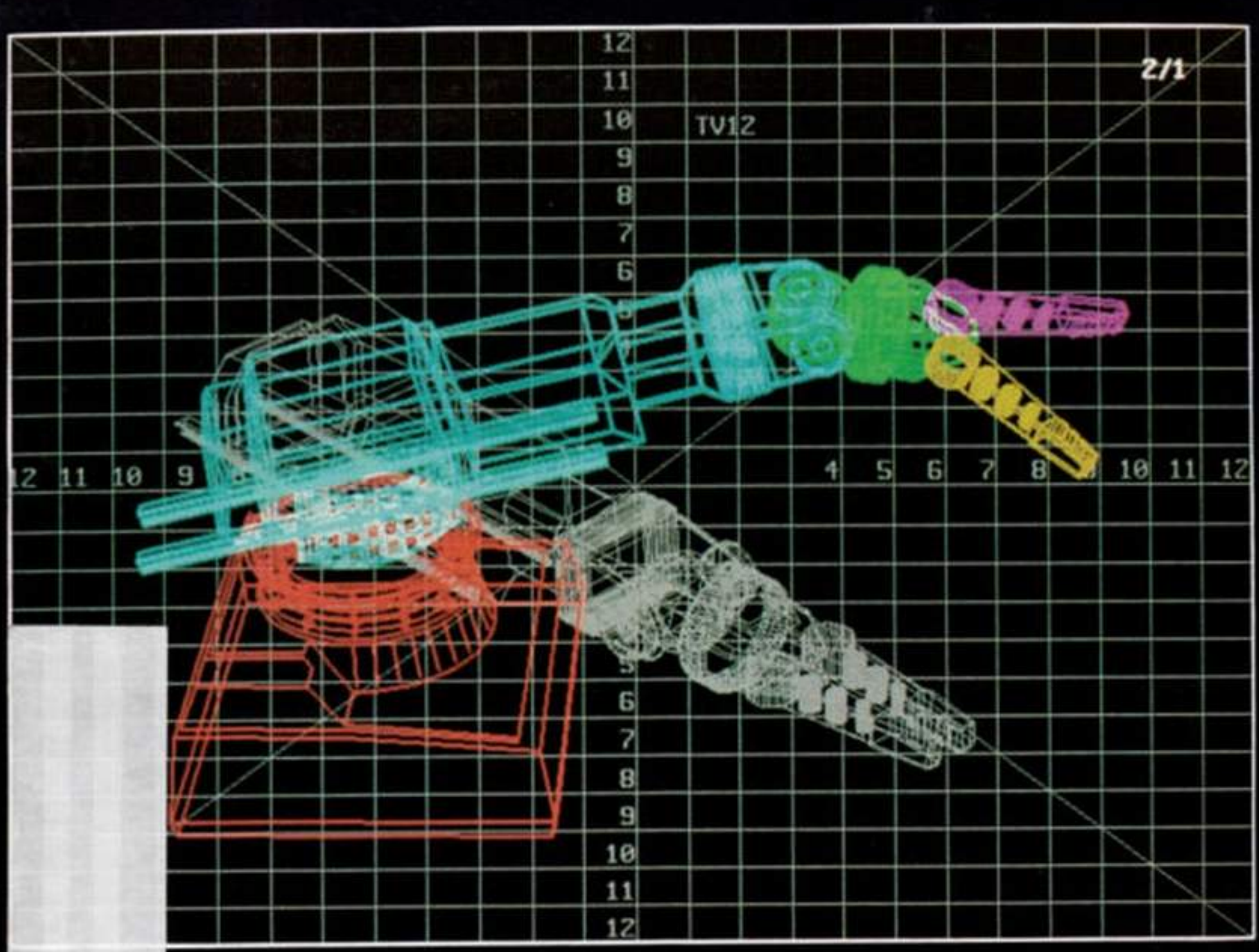

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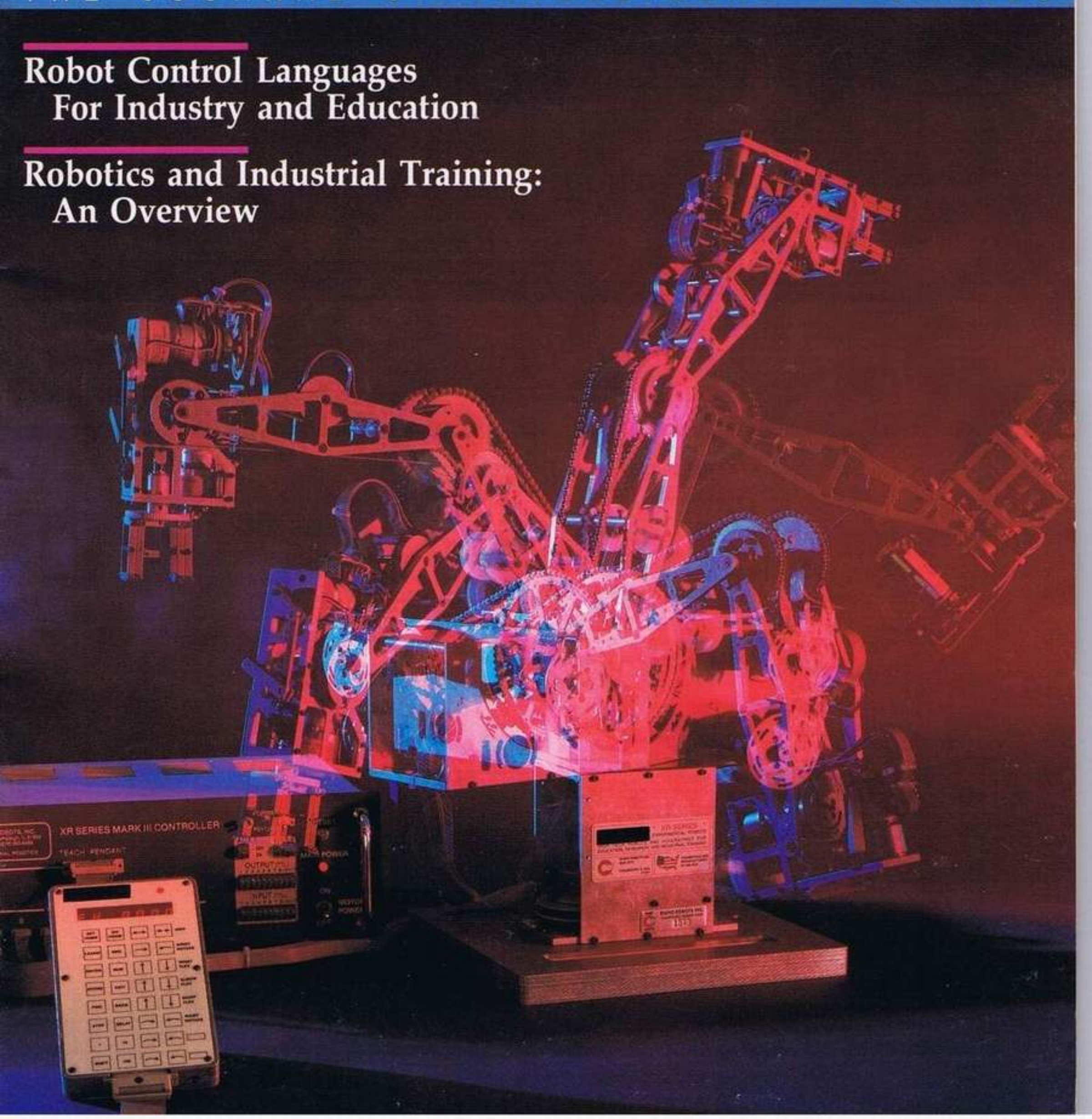

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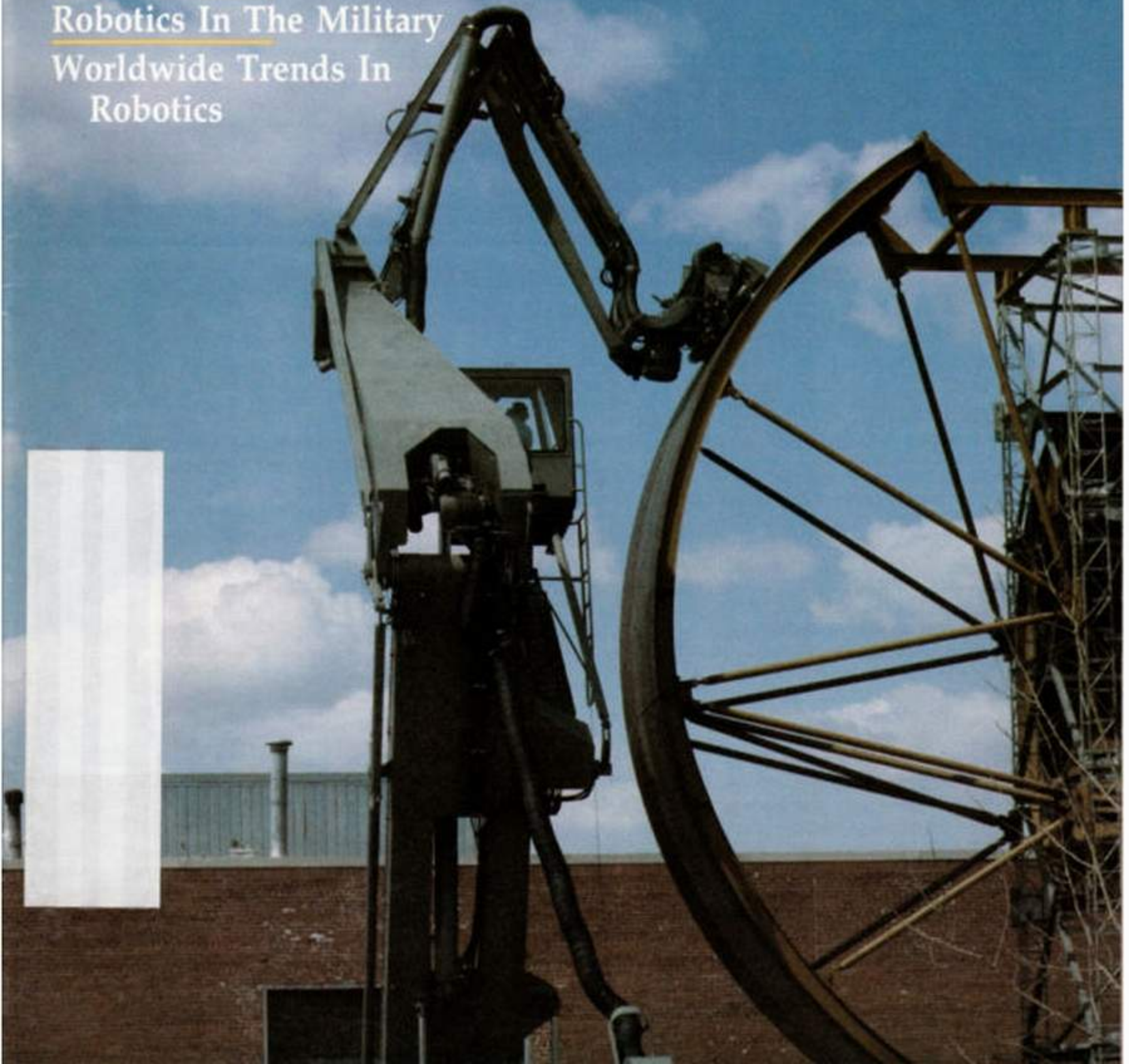

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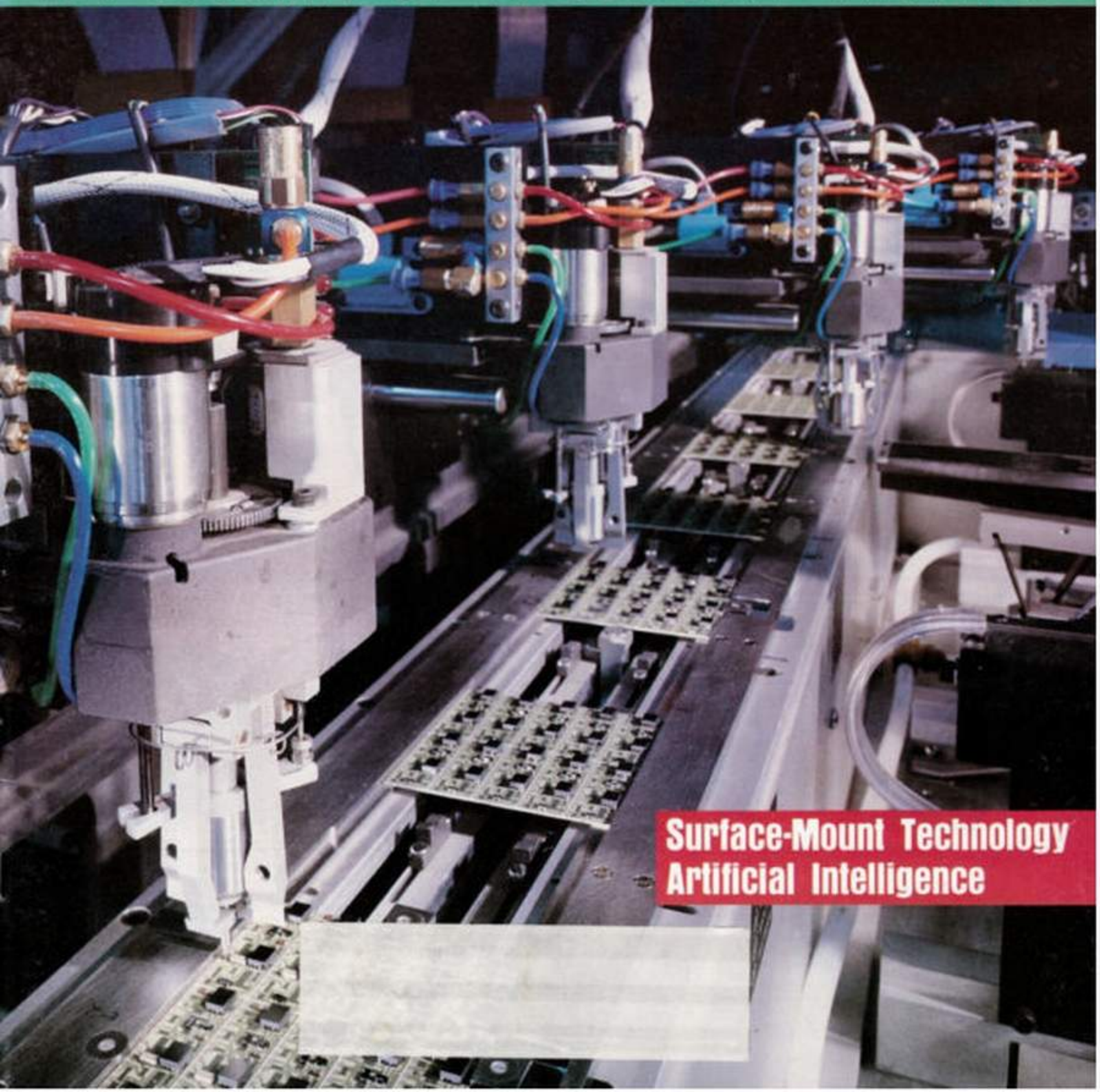

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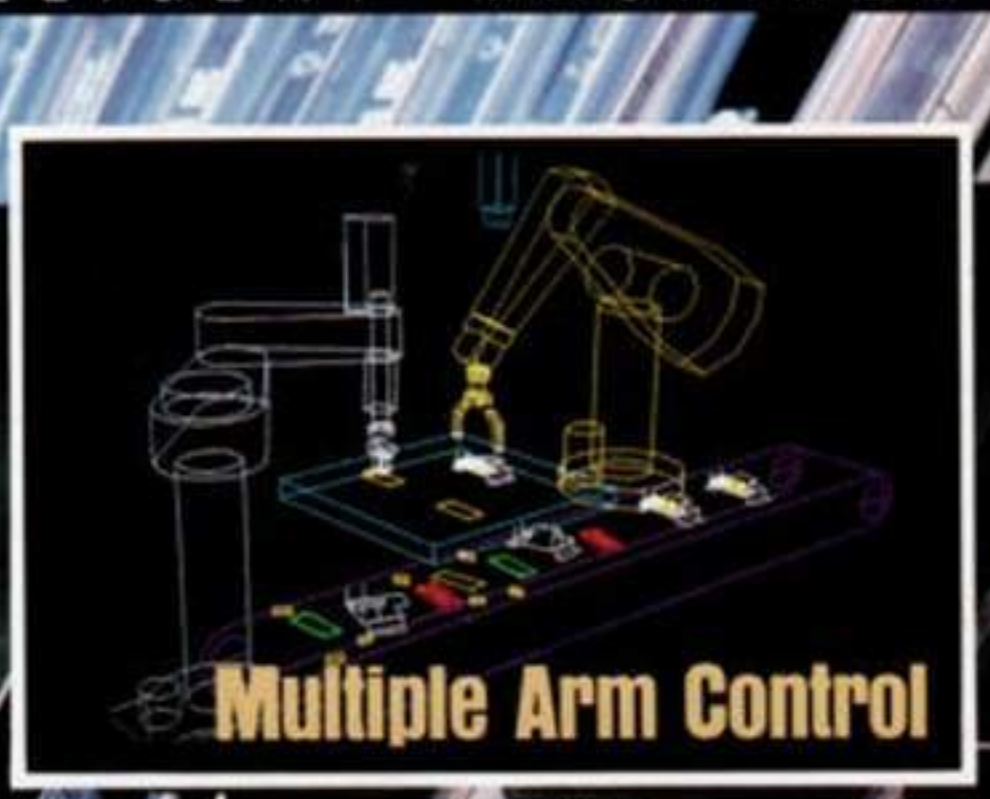

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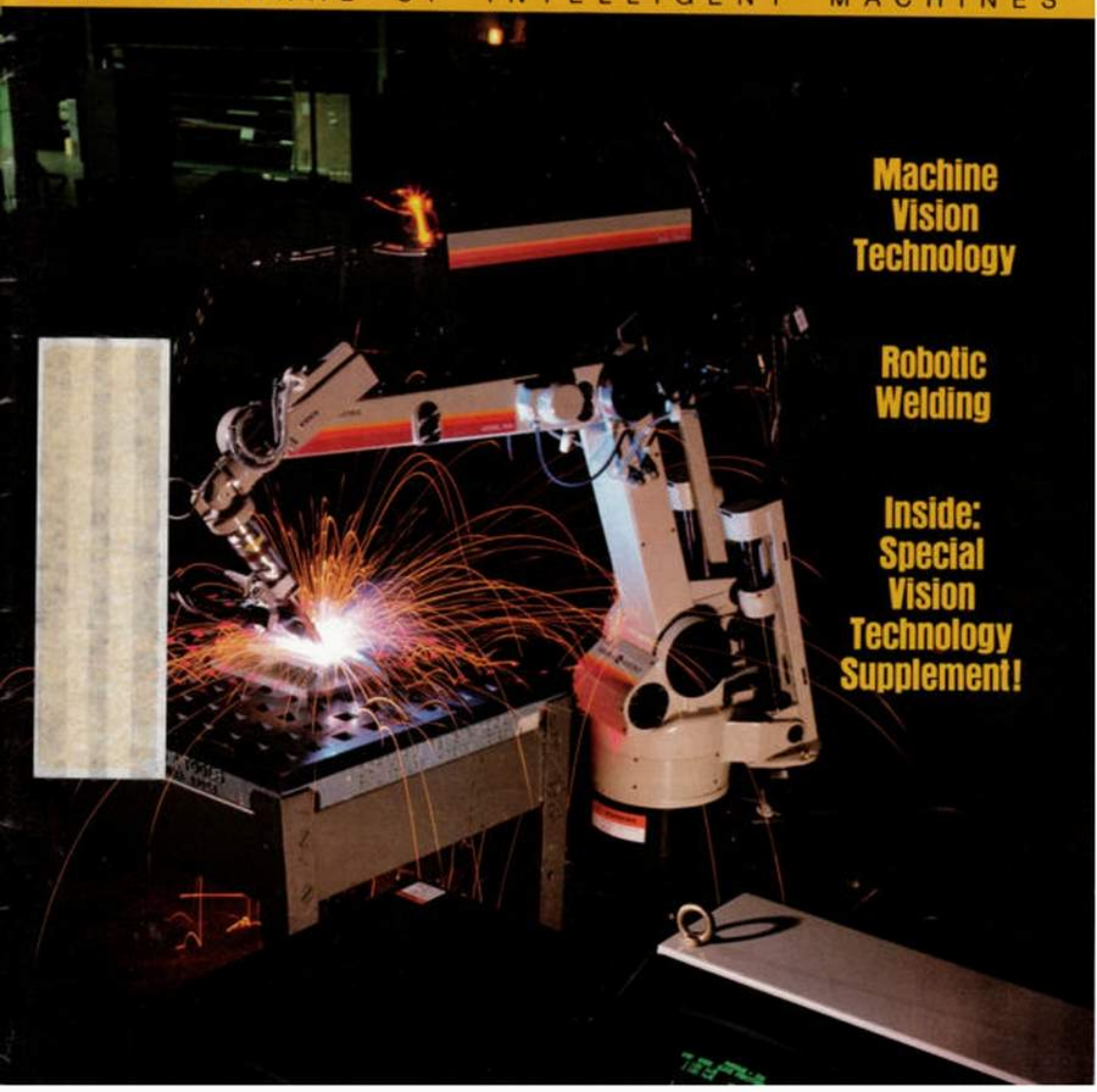

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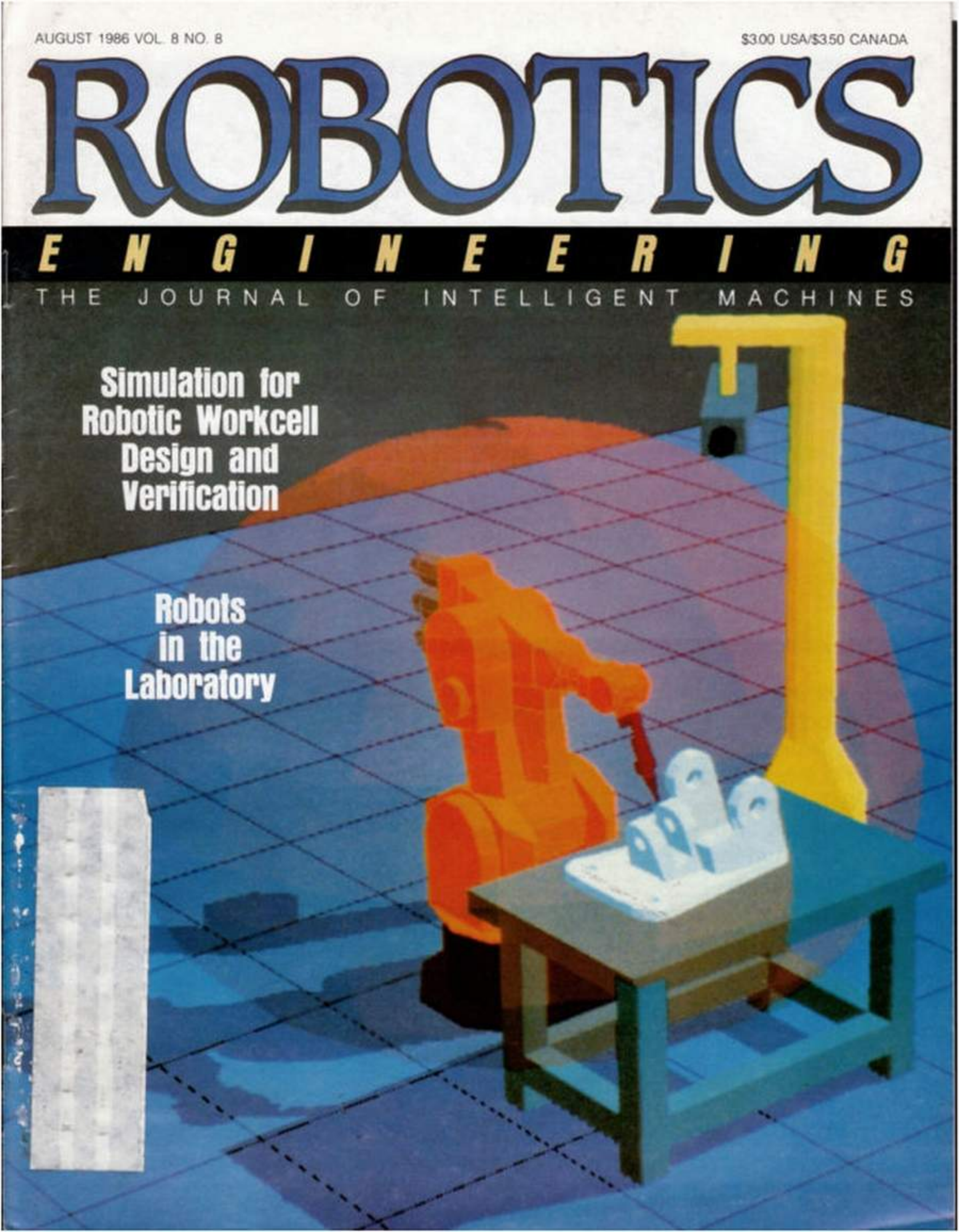

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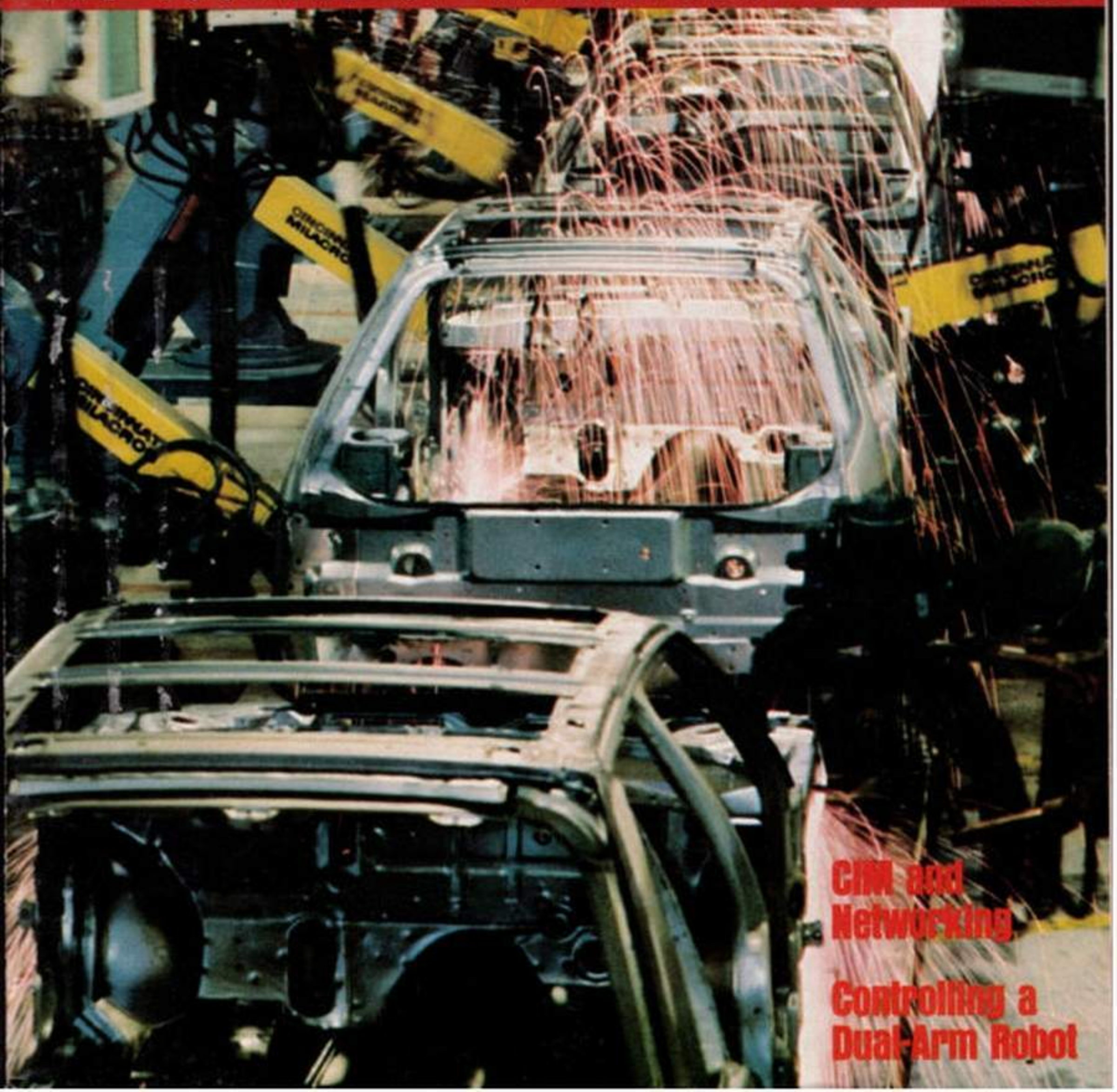

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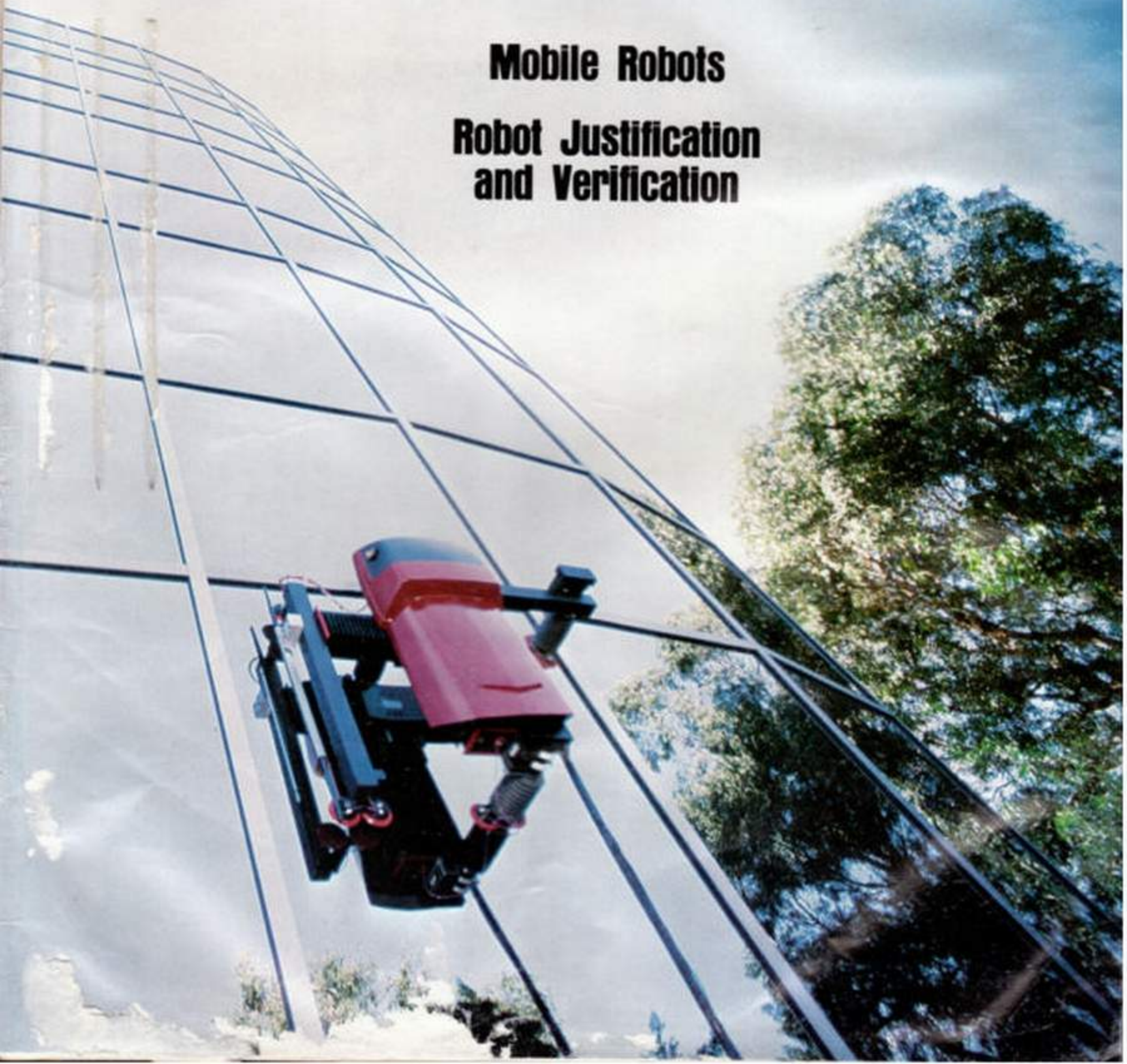
ROBOTICS ENGINEERING

THE JOURNAL OF INTELLIGENT MACHINES

Mobile Robots

Robot Justification and Verification



Scene: *An asteroid mining team of the 21st century. Not a human team, but a team of self-replicating intelligent robots.*

1961 Enter the first industrial robot—blind and unable to respond to its environment—capable only of unvarying, repetitive tasks.

1975 Robots with touch sensing begin to do precision assembly.

1981 Robots are no longer blind—silhouette vision arrives.

1982 Robots feel with an artificial skin.

1986 Robots adapt to the unstructured human environment.

1987 Reasoning robots hear and speak human speech.

1990 Walking robots explore the surface of Mars.

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