

GENERAL INSTRUMENT CORPORATION  
Inter-Office Memorandum

February 27, 1979

FROM: K. Greenberg

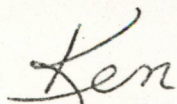
TO: D. Bogart (Mattel)  
J. Robertson (Sylvania)  
T. O'Brien (Jerrold)  
G. Dash (Dash-Strauss)

\*CC: J. Rochlis (Mattel)      A. Secor (Mattel)  
D. Chandler (Mattel) ✓      R. Norwood (GI)  
H. Cohen (Mattel)      E. Sack (GI)  
D. McGuire (Sylvania)      L. Solomon (GI)  
C. Dages (Jerrold)

SUBJECT: Mattel Intellivision Documentation

The enclosed documentation package contains the current revision of each of the following drawings:

<u>Title</u>	<u>Drawing No.</u>	<u>Date</u>	<u>Rev.</u>
Mattel Logic Board	39-133	February 21, 1979	R
Logic Board P.C. Layout	39-157	February 23, 1979	C
Logic Board Assembly	39-165	February 21, 1979	C
Mattel Cartridge Board	39-121	February 23, 1979	D'
Cartridge Board P.C. Layout	39-158	October 29, 1978	A
Cartridge Board Assembly	39-167	January 19, 1979	A
Mattel Power Supply Board	39-125	January 19, 1979	G
P.S. Board P.C. Layout	39-159	February 21, 1979	B
P.S. Board Assembly	39-166	January 6, 1979	B
Parts List	39-147	February 23, 1979	E
Memory Map	39-148	December 12, 1978	D

  
K. Greenberg

KG/cb  
Attachments

\*Memo only.

GENERAL INSTRUMENT  
INTER-OFFICE CORRESPONDENCE

March 7, 1979

FROM: K. Greenberg

TO: D. Bogart (Mattel)  
J. Robertson (Sylvania)  
T. O'Brien (Jerrold)  
G. Dash (Dash Straus)

\*CC: J. Rochlis (Mattel)                    A. Secor (Mattel)  
D. Chandler (Mattel) ✓                R. Norwood (GI)  
H. Cohen (Mattel)                    E. Sack (GI)  
F. Fedorko (Sylvania)                L. Solomon (GI)  
C. Dages (Jerrold)

SUBJECT: MATTEL INTELLIVISION DOCUMENTATION

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The enclosed documentation package contains the current revision of each of the drawings that have been modified since the February 27 release.

<u>TITLE</u>	<u>DRAWING NO.</u>	<u>DATE</u>	<u>REVISION</u>
Mattel Logic Board	39-133	March 5, 1979	S
• L1, L2 and L3 have been changed to ferrite beads.			
• R13 has been replaced by a ferrite bead, L4.			
• Ferrite beads L5-L8 have been added.			
• Capacitors C3 and C6 (0.01 uf axial caps) have been added.			
• R16 has been changed from 100 $\Omega$ to 180 $\Omega$ .			
Logic Board PC Layout	39-157	March 6, 1979	D
• Location detail of the 44 pin PCB connector has been added.			
Logic Board Assembly	39-165	March 7, 1979	D
• Revised to reflect Rev. S logic PCB artwork.			
Mattel Power Supply Board	39-125	March 7, 1979	H

MATTEL INTELLIVISION DOCUMENTATION

- Preliminary testing by Dash Straus Associates indicates that the PI filters are not required. This drawing will not supercede Rev. G until final FCC testing is completed, and these results confirmed. However, we strongly suggest that a P.S. board be drafted to this Rev. H schematic.


Parts List

39-148

March 7, 1979

F

- Revised to incorporate changes documented in drawings 39-133S.
- Two parts lists for the power supply (39-125) are shown, Rev. G and Rev. H versions are included. Rev. H will be officially released if and when Dash-Straus approves the removal of the PI filter.



Ken Greenberg

KG/lr

\*Memo only

GENERAL INSTRUMENT CORPORATION  
INTER-OFFICE CORRESPONDENCE

March 12, 1979

FROM: K. Greenberg

TO: D. Bogart           Mattel  
J. Robertson        Sylvania

CC: A. Secor            Mattel  
D. Chandler         Mattel  
H. Cohen            Mattel  
B. Aspland         Sylvania  
F. Fedorko         Sylvania  
R. Norwood         G.I.

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No sooner had we released the Rev. S documentation than we saw a need for a change in the CPU clock circuit. The enclosed drawings -

39-133 Rev. S'  
39-165 Rev. E

reflect the following changes:

The positions of R17 and CR2 have been reversed. A capacitor C16 has been added in parallel with R17. R18 has been removed entirely and the value of CR2 has been changed from an 11V to a 3.3V zener.

This change has been made on the current rev. of the printed circuit board.

Sorry for the inconvenience.

  
Ken

KG/lr  
Encl.

GENERAL INSTRUMENT CORPORATION  
INTER-OFFICE CORRESPONDENCE

April 20, 1979

FROM: K. Greenberg

TO: C. Perry (Mattel)  
J. Robertson (GTE)  
R. Henderson (Mattel at GTE)

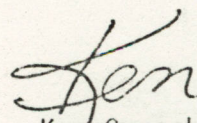
\*CC: J. Rochlis (Mattel)           A. Secor (Mattel)  
D. Chandler (Mattel) ✓       R. Norwood (GI)  
H. Cohen (Mattel)           E. Sack (GI)  
F. Fedorko (GTE)           L. Solomon (GI)  
C. Dages (Jerrold)         B. Rohrbacher (GI)

SUBJECT: MATTEL INTELLIVISION DOCUMENTATION

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The enclosed documentation package contains the current revision of each of the following drawings:

<u>TITLE</u>	<u>DRAWING NO.</u>	<u>DATE</u>	<u>REV.</u>
Mattel Logic Board	39-133	April 9, 1979	T
Logic Board PC Layout	39-157	April 9, 1979	D
Logic Board Assembly	39-165	April 9, 1979	F
Mattel Cartridge Board	39-121	April 9, 1979	E
Cartridge Board PC Layout	39-158	April 9, 1979	B
Cartridge Board Assembly	39-167	April 9, 1979	B
Mattel Power Supply Board	39-125	April 9, 1979	H
Parts List	39-147	April 12, 1979	H

  
Ken Greenberg

KG/lr  
Attach.

\*Memo only

GENERAL INSTRUMENT CORPORATION  
Inter-Office Memorandum

May 17, 1979

FROM: K. Greenberg

TO: C. Perry (Mattel)  
R. Henderson (Mattel at GTE)  
T. O'Brien (Jerrold)  
H. Kuhn (Chandler)

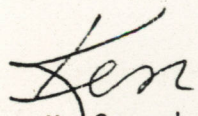
\*CC: J. Rochlis (Mattel) A. Secor (Mattel)  
D. Chandler (Mattel) R. Norwood (G.I.)  
F. Fedorko (GTE) E. A. Sack (G.I.)  
C. Dages (Jerrold) B. J. Rohrbacher (G.I.)

SUBJECT: MATTEL INTELLIVISION - SYSTEMS DOCUMENTATION

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The enclosed documentation package contains the production release revision of each of the following drawings. From now on, all of the revisions will require Engineering Change Notices.

<u>TITLE</u>	<u>DRAWING NO.</u>	<u>DATE</u>	<u>REV.</u>
Mattel Logic Board	39-133	May 15, 1979	T
Logic Board PC Layout	39-157	May 15, 1979	D
Logic Board Assembly	39-165	May 15, 1979	F
Mattel Cartridge Board	39-121	May 15, 1979	E
Cartridge Board PC Layout	39-158	May 15, 1979	B
Cartridge Board Assembly	39-167	May 15, 1979	B
Mattel Power Supply Board	39-125	May 15, 1979	H
P.S. Board PC Layout	39-159	May 15, 1979	B
P.S. Board Assembly	39-166	May 15, 1979	C
Parts List	39-147	May 15, 1979	J

  
K. Greenberg

KG/mk  
Attachments

\*Memo only.

May 21, 1979 .

OPS 53

TO: Distribution  
FROM: Alan Secor *A. Secor*  
SUBJECT: GI Contract for production of chips for intellivision.

The attached draft of subject Contract is for your review and comment. It has incorporated previous suggested changes and has a different overall format than that submitted by GI. A table of contents is provided for your convenience.

Tom Dineen will be responsible for coordinating your input in a meeting Wednesday morning, May 23rd. He will advise you of the time and place.

Your inputs are appreciated.

Final negotiations with GI are planned for May 25th and 26th.

cc: H. Cohen  
T. Perez  
J. Bachmann

T. Dineen  
M. Weinstock  
E. Krakauer

J. Rochlis  
N. Heath

PRELIMINARY CONTRACT DRAFT

INTELLIVISION MASTER COMPONENT CUSTOM LSI

Semiconductor Devices

5/19/79



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TERMS AND CONDITIONS  
OF SALE AND PURCHASE

AGREEMENT made as of the \_\_\_\_\_ day of January, 1979, by and between GENERAL INSTRUMENT CORPORATION, Microelectronics Division, a Delaware corporation, with a place of business at 600 West John Street, Hicksville, New York ("Seller") and Mattel Electronics Division, a Division of Mattel, Inc., a Delaware corporation, with a place of business at 5150 Rosecrans Avenue, Hawthorne, California ("Buyer").

W I T N E S S E T H :

WHEREAS, Seller desires to manufacture and sell certain micro-electronic equipment (the "Products") to Buyer and Buyer desires to purchase the Products from Seller;

WHEREAS, Seller and Buyer desire to establish the terms and conditions of sale and purchase for the Products which shall supersede the standard terms and conditions set forth in their respective purchase order and order acknowledgement forms;

NOW, THEREFORE, in consideration of the premises and mutual covenants and agreements set forth herein, the parties agree as follows:

1. Formation of Contract. Any term or condition of (a) Buyer's order; (b) releases pertaining thereto; (c) Seller's order acknowledgement; or (d) any communication between Buyer and Seller which is in any way inconsistent with or in addition to the terms and conditions set forth herein shall be deemed to be null and void and shall not be binding on either party hereto, unless subsequently agreed to in writing in accordance with this contract.

2. Products. (a) The Products (Parts) purchased hereunder shall be

those set forth in Exhibit A attached hereto. The parties may increase, decrease or modify the items included in the Products at any time by a writing in accordance with Paragraph .

(b) The Products (Parts) shall be manufactured and shall perform in accordance with certain specifications to be mutually agreed to by the parties hereto in writing and attached to this Agreement as Exhibit B.

(c) Notwithstanding the foregoing provision, in the event Buyer shall give Seller a production release for the Products prior to an agreement between the parties regarding said specifications, Seller shall be liable for all costs incurred by Seller in connection with such production release in the event that parts produced do not provide specified system performance as defined in Exhibit C.

3. Design Changes. Buyer may require seller to provide changes and/or additions to the products and specifications listed in Exhibit A and Exhibit B respectively. Upon written request, Seller shall provide Buyer with written quotation setting forth the design and development costs, production costs and schedule impact for such changes. Unless otherwise notified Seller's response shall be within 10 (ten) working days.

4. Ownership of Tooling and Drawings. All drawings and tooling prepared or manufactured by or for the Seller during the period of design and development of the products of Exhibit A hereunder shall become Buyer's property upon payment by the Design and Development as identified in the development contract dated June 29, 1978.

5. Production Purchases.

5.1 Quantity Requirements. Upon satisfactory completion of the Development agreement of June 29, 1978 and other agreed upon part qualification testing, Buyer agrees to purchase and Seller agrees to produce the number of units of Product, at the prices per unit, and within the period of time

("Purchase Period") set forth in Exhibit D. Buyer may enter purchase orders for Product in satisfaction of its obligations hereunder at such time as Buyer may deem appropriate ("Purchase Orders") during the Purchase Period.

5.2 Purchase Orders. Such Purchase Orders shall refer to this Agreement, describe the Product, request a delivery date, list the applicable price, state the location to which the ordered Product is to be shipped, the location to which invoices shall be rendered for payment, routing instructions, and the method of shipment to be used. Upon receipt, Seller shall promptly acknowledge receipt of each Purchase Order.

5.3 Price Adjustments. The parties hereto agree to attempt in good faith to renegotiate the prices set forth in Exhibit D, six months after the Effective Date and every six months thereafter, in order to take into account expected productivity improvements and associated reductions in Seller's cost of manufacturing. In no event shall the renegotiated prices exceed those set forth in Exhibit D.

5.4 Reduction Effort. Both parties agree to diligently work to establish design improvements and specification definition which will increase producibility without impacting end system performance. The results of these efforts will be jointly reviewed on a periodic basis to establish cost reductions and plans for future work.

## 6. Shipping and Billing.

6.1 Product. Product shipped pursuant to a Purchase Order shall be shipped complete unless Buyer instructs Seller otherwise.

6.2 Shipping Point. All shipments hereunder shall be made to the location designated in the applicable Purchase Order and in accordance with any specific instructions contained therein.

6.3 Packing Memorandum. Supplier shall enclose with each shipment

hereunder a packing memorandum, and, in the event that more than one package is shipped at one time, Supplier shall identify the package containing the packing memorandum.

6.4 Invoices. All invoices shall be rendered in duplicate by Supplier unless otherwise specified by Buyer, and each such invoice shall show the applicable Purchase Order number, through routing and weight.

6.5 Purchase Order Acknowledgment. Seller shall promptly acknowledge to Buyer its receipt of any Purchase Order hereunder and all invoices and/or other billing materials shall be sent to the location designated on the applicable Purchase Order.

6.6 Shipping Costs/Arrangements. Product will be shipped F.O.B. point of origin. Buyer shall pay all transportation charges thereafter which charges shall be invoiced to Buyer by Seller separately. The parties may mutually agree to change shipping and/or routing instructions without written notice. Seller shall select the least expensive mode of transportation and carrier consistent with the delivery requirements of Buyer, unless otherwise instructed by Buyer.

6.7 Delivery Schedule. Product shall be shipped per the schedule of Exhibit D, unless the parties mutually agree to an alternate delivery schedule applicable to a given Purchase Order. Weekly visibility concerning part availability shall be provided throughout the Seller manufacturing process. This information will be compiled on a part number basis and sent by telecopier to Buyer. Data on each part number shall include, but not be limited to number of wafer starts, number of wafers in process, number of good die probed, number of die in assembly and number of parts in final test.

6.8 Packaging. Product shall be shipped in containers designed to insure carrier acceptance and to protect the Product against damage during shipment, handling and storage. Such containers shall also comply with

Uniform Freight Classification Rules, or such other regulations as apply to the mode of transportation used to ship the Product.

6.9 Title and Risk of Loss.

6.9.1 Title. Title to Equipment furnished to Buyer shall vest in Buyer upon arrival of the Equipment at the location specified in the applicable Purchase Order.

6.9.2 In Transit Loss. Supplier assumes the risk of loss for Product which is in transit. Supplier will provide satisfactory insurance coverage for all such Product. Risk of loss shall pass to Buyer at the time that title passes to Buyer.

7. Inspection, Testing, Acceptance and Rejection. The products purchased hereunder shall be subject to inspection, test and acceptance by Buyer in accordance with the standards and procedures set forth in Exhibit B and E.

7.1 On-Site inspection and acceptance.

7.1.1 Buyer may, at its sole option and expense, establish and maintain on-site inspectors at the Seller's wafer fabrication, assembly and final test locations to expedite the Buyer's inspection and acceptance of the Products. Such on-site inspectors may be either employees of Buyer or designated agents therefor.

7.1.2 Acceptance of the Products by an on-site inspector shall be deemed to be acceptance by Buyer. Within a 30 Day period after acceptance, Buyer shall be entitled to reject lot if system compatibility or use tests fail the specified requirements.

7.1.3 On-site inspector shall not interfere with, delay or otherwise obstruct the operation of the Seller's facility. However, inspector may request stop shipment of Buyer's product in the event workmanship or quality do not conform to the requirements of Exhibit E.



7.2 Off-site Acceptance. In the event Buyer shall not exercise the option set forth in 7.1.1 above, the following shall apply:

7.2.1 Buyer may inspect the Products at any reasonable place and time, including Buyer's plant or any other point of destination specified on the Buyer's purchase order or shipment release.

7.2.2 If Buyer shall designate an agent to perform such inspection and acceptance, the Products shall be deemed to be accepted by Buyer upon acceptance by such agent except as noted in Paragraph 7.1.2.

7.2.3 If, within sixty (60) days of receipt of a shipment, Seller shall not receive written notification of non-conformity from either Buyer or its agent, said shipment shall be deemed to be accepted.

7.3 Lot Acceptance/rejection. Within sixty (60) days of receipt of a shipment, Buyer or its agent shall be entitled to reject any Products which have been tested by Buyer and do not meet the specifications set forth in Exhibit B and E. The Buyer shall accept Product on a lot by lot basis. Acceptance criteria shall be per Exhibit B and E. Each item or device set forth in Exhibit A shall be independently measured from all other items or devices to determine whether such item or device meets the requirements specified in Exhibit B and E. Additionally, a system test will be performed using random selection of parts to an LTPD of 7/2. If either the individual or system test fail, the lot shall be rejected.

7.3.1 Notification. In the event Buyer or its agent shall reject any of the Products hereunder in accordance with Paragraph 7.3 above, Seller shall be given prompt notice thereof and an opportunity to inspect at the inspection location of Buyer or its agent.

7.3.2 Replacement/repair. Any Products rejected in accordance with Paragraph 7.3 above and found to be non-conforming by Seller shall be repaired or replaced, at Seller's option provided critical shortages do not exist. If Products are needed to sustain production, the quickest

method shall be used. Seller may perform any minor repair work at the inspection location of Buyer or its agent provided it does not interfere with normal production activities. In no event shall Seller be liable to Buyer in any manner for such non-conforming Products except for timely repair or replacement thereof.

7.3.3 Corrective Action. Seller shall provide Buyer with written acknowledgement and verification of the cause for product rejection. In the event that two (2) successive lots of the same part type are failed for the same reason, the Seller shall take prompt action to identify the failure modes and take appropriate corrective action. These actions shall be appropriately documented and forwarded to Buyer in a timely fashion.

8.0 Product Qualification. The Buyer may perform Product qualification per Exhibit B and E initially and at various periods throughout the contract duration. In the event that tests are failed, supplier shall take prompt action to identify failure modes and implement corrective action.

9. Delivery. The Delivery requirements are set forth in Exhibit "D". Time is of the essence. In the event that Seller shall be in arrears of an acknowledged, scheduled shipment, which delay shall not be caused by an event described or intended by Paragraph \_\_\_ hereof, by Sixty (60) days or more prior to September 1, 1979, Buyer may, at any time prior to the time Seller ships such quantity in arrears, cancel without cost the quantity then in arrears, or any portion thereof, upon written notice to Seller. Buyer shall have no right of cancellation if Seller shall be in arrears by less than Sixty (60) days, except if such arrears occur beyond October 1. Recognizing the criticalness of Christmas shipments, Buyer may reschedule remaining quantities. The cancellation privilege provided herein shall be the Buyer's sole and exclusive remedy with respect to any arrears of acknowledged and scheduled shipments hereunder.

*what happens between Sept 1 + oct 1 and after oct 1 about arrears?*

10. Agency. Buyer may at any time and from time to time, upon written notice to Seller, appoint agents for the performance of certain acts, related to the Products, including, but not limited to, inspection and acceptance, order and release for shipment, receipt of shipments, settlement of claims, changes in the Products and specifications and the like. Notwithstanding the foregoing notice of appointment, once Buyer confirms such agents authority in writing, Seller may rely on the advice and instructions of any such agent within the scope of such agents authority. Buyer shall indemnify and hold Seller harmless from liability of any kind on account of any and all acts of any agent appointed by Buyer, whether or not such acts shall be within the scope of the agency.

11. In the event that Seller shall not be able to perform this Agreement as provided in Paragraph 13 hereof or the quantities of the Products specified on Buyer's orders and releases thereof exceed Seller's capacity to manufacture and ship and Buyer requests in writing that Seller establish a second source of supply for the Products, Seller shall use its best efforts to enter into an agreement with a subcontractor approved by Buyer who shall manufacture the items and quantities of the Products specified by Seller. All design data, photo tool masters, process data, and test programs and procedures will be made available to the selected subcontractor. Additionally, process and product engineering support will be made available as required to support a timely start up of subcontractor. Buyer will have the option to purchase requirements directly from the second source. This Agreement does not grant Seller an exclusive privilege to sell to Buyer any or all products of the type described herein which Buyer may require. Buyer may contract with other manufacturers and suppliers for the procurement of comparable products.

12. Seller's Warranty.

12.1 Definition. Seller warrants to Buyer that the Products accepted by Buyer hereunder shall comply with the specifications set forth in Exhibit B and E and under normal use as prescribed in Intellivision Application shall be free from defects in materials and workmanship for a period of one year (365 days) after the date of shipment by Seller thereof. Seller's liability under this warranty shall not extend to any other person or entity other than Buyer or his subcontractors and agents and shall be limited to the repair or replacement, at Seller's option, of any defective Products. Seller shall be liable for all shipping charges to the location designated by it in connection with defective Products returned pursuant to this

warranty. *Properly performed soldering of parts to a printed circuit board shall have no effect on this warranty.*

12.2 Seller's Warranty Actions. In the event of a breach of the warranty as set forth in Section 12.1, Buyer, at its option, may require Seller to promptly repair or replace the defective and/or non-conforming Product and to pay any incidental damages or charges in connection therewith.

12.3 Warranty Provisions. The warranty provisions of this Agreement shall survive inspection, acceptance and payment.

12.4 Return Under Warranty. Buyer may return any defective or non-conforming product to Seller for performance of the services described in Section 12.2, and Seller shall pay all shipping costs associated with such return and shall bear the risk of loss during the period that such Products are out of Buyer's possession. Repaired or replaced product shall be returned to Buyer by Seller. Such products will be shipped F.O.B. destination, freight prepaid.

12.5 Warranty and Repairs. The Warranty set forth in Section 12.1 shall also apply to any such repaired or replaced Products except that the twelve (12) month warranty period shall commence upon Buyer's receipt of

such repaired or replaced Product.

12.6 Warranty Liability. Seller further agrees to indemnify and hold Buyer harmless against liability for any cost, expense, damage, claim, demand, or other charge (including reasonable attorney's fees) which Buyer may incur, or which may be asserted against Buyer by any third party, arising out of a breach of warranty set forth in Section 12.1.

13. Contingencies. Seller shall not be liable for any delay in performance or for non-performance, in whole or in part, caused by the occurrence of any contingency beyond the control of either Seller or Seller's suppliers, including, but not limited to, war (whether an actual declaration thereof is made or not), sabotage, insurrection, riot or other act of civil disobedience, act of a public enemy, failure in transportation, act of any government or any agency or subdivision thereof affecting the terms of this Agreement or otherwise, judicial action, non-local labor dispute, accident, fire, explosion, flood, storm or other Act of God, or disapproval by the Federal Communications Commission. Any such delays shall excuse Seller from timely performance, and Seller's time for performance shall be extended, for the period of the delays up to 60 days providing Seller makes all reasonable efforts to recover from such conditions. Beyond October 1, Buyer has the option to cancel or reschedule. If any shortages occur, Seller may allocate production and deliveries among any or all of Seller's customers currently under contract. However, Buyer has first right of refusal on any of the Product types listed in attachment "A". Buyer also has first right of refusal on all output from the four inch wafer module at the Chandler facility. Buyer may, at its option, cancel this contract for non-performance anytime after sixty days (60) of continuing production interruption where Seller has not made reasonable efforts to recover. Buyer may at its option, cancel this contract for its convenience pursuant to Paragraph 14.1 and 14.2i and 14.2ii anytime after

sixty (60) days of continuing production interruption caused by a continuing force majeure.

14. Termination.

14.1 Notification. Buyer shall have the right to terminate this Agreement upon 30 Days prior written notice to the other party to such effect.

14.2 Disposition of work in process.

(A) In the event Buyer shall terminate this Agreement, Seller shall be permitted to ship and Buyer shall accept delivery of:

(i) the finished Products presently in Seller's inventory not to exceed a quantity equal to the scheduled shipments for thirty (30) days immediately after the effective date of said termination; and shall constitute compliance with Buyer's order and release and the unit price shall continue to apply.

(ii) an additional quantity of the Products equal to the number of Products which can be manufactured from the wafers currently in Seller's manufacturing process at the date of termination, which Products can be completed and shipped within sixty (60) days after the effective date of said termination.

(B) In lieu of (A)ii above, Buyer may elect in the termination notice to Seller, to pay termination charges equal to all costs, direct or indirect, incurred and committed for all raw materials and goods in process at the date of termination. Buyer may, at its option and expense, request that all termination charges be verified by Arthur Young & Company, as witnessed by the Buyer. Information disclosed by Seller to Arthur Young & Company shall be deemed confidential by Buyer. Seller will make all documentation received from auditors available to Buyer; as well as working papers, documents, analysis, reports, and summaries supplied to the auditor by the Seller.

15. Patent Infringements, Trademarks and Copyrights.

15.1 Indemnification. Seller shall indemnify Buyer its subsidiaries and/or affiliates against any loss, damage, expense, or liability that may result by reason of any infringement of any applicable patent, trademarks, or copyrights based on the normal use of the Product except to the extent that such infringement or claim arises from Seller's adherence to Buyer's specifications which do not follow the specifications for Seller's standard product practice.

15.2 Settlement. Buyer reserves the right to defend or settle at its own expense any action for which it is responsible hereunder.

15.3 Notification. Each party hereto shall notify the other promptly of any claim of infringement of which it learns for which the other party is responsible, and, further, shall cooperate with the other as the other may reasonably request in the defense of any such claim.

16. Proprietary Rights and Confidentiality.

16.1 Definition. All information, know-how, programming, software, trademarks, trade secrets, plans, drawings, specifications, designs and patterns furnished or created by Buyer or by agents or contractors of Buyer in connection with the sale of the Products and any and all property rights embodied therein are and shall remain the sole property of Buyer and neither Seller nor any other party shall have or acquire any interest therein.

16.2 Procedure. Both parties recognize and acknowledge that any confidential, secret or proprietary information, including those matters set forth in Paragraph 16.1 above, ("Information") possessed by either one of them is a valuable business asset of such party and that disclosure of the Information would cause grave and irreparable injury to such party. Therefore, both parties shall at all times, whether during the term of this Agreement or subsequent thereto, honor, maintain and protect the

confidentiality and secrecy of such of the Information as may be disclosed in connection with the performance of this Agreement. The recipient of the Information shall not disclose at any time, nor permit its officers, employees or agents to disclose at any time (either during their respective employment by the recipient or thereafter), nor appropriate or use on its own behalf or on the behalf of others any of the Information, without in each instance first obtaining the written consent of the owner of the Information. The parties shall not make any copies of any of the Information for distribution outside of their respective plants without prior written consent of the other party and shall take appropriate action to restrict access to the Information to those of its employees and agents who have an actual need for such access in the course of their duties. In the case of agents, assemblers and subassemblers of Seller or Buyer or any third party to which Buyer or Seller, with the consent of Buyer or Seller, discloses the Information of the other, the party shall obtain written agreements obligating such persons to honor and protect the confidentiality of such Information. The provisions of this Paragraph 16 shall survive the performance, termination or cancellation of this Agreement, and either party shall, without limitation or any other remedies at law available to it, be entitled to seek appropriate equitable or injunctive relief in respect of a breach of this Paragraph without the necessity of proving damages.

17. Publicity. Seller agrees to submit to Buyer all advertising, sales promotion materials, press releases and other publicity matters relating to the products furnished or the services performed by Seller under this Agreement wherein the name of Buyer is mentioned or language from which the connection of said name therewith may be inferred or implied; and Seller further agrees not to publish or use such advertising, sales promotion materials, press releases, or other publicity matters without Seller's prior written approval.

*Buyer's*



18. Compliance with Laws. Seller shall comply with all applicable federal, state, county and local laws, ordinances, regulations and codes (including procurement of required permits or certificates) in Seller's performance hereunder. Seller agrees to indemnify Buyer for any loss or damage sustained because of Seller's non-compliance.

19. Choice of Law. The construction, interpretation and performance of this Agreement and all transactions under it shall be governed by the laws of the State of \_\_\_\_\_.

20. Notices. All notices or communications required by this Agreement (other than purchase orders and acknowledgements) or desired to be given hereunder, shall be in writing addressed as follows and given by certified or registered mail, return receipt requested, or by telex and shall be deemed to be given when received:

If to Seller, to

General Instrument Corporation,  
Microelectronics Division  
600 West John Street  
Hicksville, New York 11802  
Attn: R. Norwood

and, with respect to any notice of default or termination, to

General Instrument Corporation  
1775 Broadway  
New York, New York 10019  
Attn: Legal Department

and, if to Buyer, to

Mattel, Inc.  
Mattel Electronics Division  
5150 Rosecrans Avenue  
Hawthorne, California 90250  
Attn:

21. Assignment. This Agreement is binding upon and inures to the benefit of the parties hereto and the successors and assigns of the entire business and goodwill of either Seller or Buyer or that part of the business of either used in the performance of this Agreement, but shall not be otherwise

assignable. Nothing in this Agreement shall inure to the benefit of or be deemed to give rise to any rights in any third party, whether by operation of law or otherwise.

22. Merger. This Agreement, including all exhibits, and the acknowledged orders of Buyer with respect to quantities of the Products, shall constitute the final, complete and exclusive written expressions of all terms of the sale and purchase of the Products and related matters. This writing shall supersede all previous communications, representations, agreements, promises or statements either oral or written, with respect to such transactions and no communications, representations, agreements, promises or statements of any kind made by Seller or a representative of Seller, which are not herein stated, shall be binding on Seller. No addition to or modification of any printed provision of this Agreement shall be binding upon Seller unless made in writing and signed by an officer of the party to be charged.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed by their respective duly authorized officers as of the date and year first above written.

Mattel Electronics Division  
Mattel, Inc.

By \_\_\_\_\_

Title \_\_\_\_\_

General Instrument Corporation  
Microelectronics Division

By \_\_\_\_\_

Title \_\_\_\_\_ Senior Vice President

EXHIBIT "A" - Product Description

List of G.I. Part Numbers

Item	Part Description	Part Number	Revision No.
1	CPU		
2	Control Ram		
3	STIC		
4	Exec. ROM - 1		
5	Exec ROM - 2		
6	Graphics ROM		
7	Color Chip		
8	Sound Chip		
9	Cartridge ROM - 1		
10	Cartridge ROM - 2		

} variety of patterns

EXHIBIT "B" Part Specifications

These are the detailed specifications which delineate the required performance of each part to assure satisfactory system performance. G.I. has submitted them and Mattel is in the process of reviewing them for concurrence (modification).

EXHIBIT "C" System Specifications

This outlines the required performance of the chip set as related to the requirements of the Master Component. Mattel is preparing this document for G.I. review and concurrence.

EXHIBIT "D" Schedule and Pricing

Detailed schedule and pricing to be negotiated as part  
of G.I./Mattel meeting May 24 and 25, 1979.

EXHIBIT "E"      General Semiconductor  
Quality Specifications

Currently under negotiation with G.I.

MATTELCO HWTH

GIMICROELHKVL

5/30/79 MES. NO. DK-2053

TO: T. DINEEN MATTEL

CC: A. SECOR, D. CHANDLER, R. TIMMONS, K. GREENBERG

A REMIORDER THAT YOU GAVE MA THE FOLLOWING SCHED FOR ROM CODE RELEASE:

CTW MATH FUN	5/25
FOOTBALL	5/29
BACKGAMMON	5/25
ARMOR BATTLE	5/29
CHECKERS	6/1
GALACTICA	6/15
HOCKEY	6/15
LAS VEGAS II	6/15
CTW SPELLING	7/16
HORSE RACING	7/16
AUTO RACE	7/16

**REPLY  
REQUESTED**

PLEASE FORWARD THE CODES DUE ON OR BEFORE 5/29 AND RECONFIRM THE SCHED FOR THE BALANCE OF THE ROMS.

REGARDS,

R.C. NORWOOD GI HIX

GIMICROELHKVL

MATTELCO HWTH

GIMICROELHKVL



MATTELINEC HWTH

MATTELINEC HWTH

GIMICROELHKVL

6/6/79 MES. NO. DK-2080

TO: CLIFF PERRY MATTEL

CC: A. SECOR : MATTEL

L. CHANDLER MATTEL

B. ASPLAND GTE

R. HENDERSON GTE

R. NORWOOD GI

RE: LOGIC BOARD - REV. U

I CANNOT PROCEED WITH REV. U OF THE LOGIC BOARD UNTIL I  
GET THE FOLLOWING:

1. DIMENSIONS OF 47 UCR 50 UF) RADIAL CAPACITOR.
2. DIMENSIONS OF 1 UF NON-POLARIZED RADIAL CAPACITOR.
3. VALUE AND POWER RATING OF LIMITING RESISTOR ASTEC NEEDS IN  
12 VOLT SUPPLY TO MODULATOR.

REMINDER - I HAVE RECEIVED NO REQUESTS FOR CHANGES IN WRITING  
FROM ANYBODY.

REGARDS,

KEN GREENBERG GI HIX  
GIMICROELHKVL

MATTELINEC HWTH

GIMICROELHKVL

MATTELINEC HWTH

June 8, 1979

TO: Ken Greenberg - General Instruments  
FROM: Clif Perry  
SUBJECT: REV "U" LOGIC BOARD

You should proceed immediately to update the 2609 logic board to Rev U status. As I understand it, the following changes will be incorporated in the Rev U board:

1. Add zever diode and resistor in 12 V supply to 9600 RAM.
2. Add 47MFD electrilytic cap to modulator supply line.
3. Change C26 in reset line to non polarized style electrilytic.
4. Add dropping resistor to modulator supply line and change supply line from 5 V to 12 V.
5. Change R9 on video output line from pull-up to pull-down.
6. Add test pads per GTE requirements.
7. Add jumper in series with B+ side of channel select switch. (UM1285-8 (Mattel 0099-1160 Rev C) modulators do not require channel 4 select connection to B+. An internal pull-up resistor is used instead.)
8. Include any copper or tooling changes requested by GTE and approved by Mattel engineering.

I realize several of the above items require information be supplied to you in order to make the necessary board changes. This information will be forthcoming form Bob Asplund or myself in the next day or two.

Barring further changes, production should start with the Rev U board design, with the exception of the first 500 systems.

CP/lw

cc: Alan Secor  
Dave Chandler  
Denny Bogart  
Bob Asplund - GTE  
Jim Robertson  
Roland Henderson  
Fritz Fedorko


GENERAL INSTRUMENT CORPORATION  
INTER-OFFICE CORRESPONDENCE

August 17, 1979

FROM: K. Greenberg  
TO: A. Secor  
CC: E. A. Sack C. Perry Mattel  
B. J. Rohrbacher D. Chandler Mattel  
C. Chillemi  
R. Norwood  
P. Pecoraro  
SUBJECT: MATTEL INTELLIVISION DOCUMENTATION

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This package contains archival quality copies of the entire set of G.I. generated Intellivision documents.

Included are auto-positives of the logic and cartridge PCB artwork. These must be kept flat under low-humidity conditions to insure long life. Since the taped layout deteriorates rapidly, the enclosed copies should be treated as originals.

  
Ken Greenberg

KG/lr

Encl.

<u>TITLE</u>	<u>DRAWING NO.</u>	<u>DATE</u>	<u>REV.</u>
Mattel Logic Board	39-133	July 31, 1979	U
Logic Board PC Layout	39-157	May 15, 1979	D
Logic Board Assembly	39-165	July 31, 1979	G
Mattel Cartridge Board	39-121	May 15, 1979	E
Cartridge Board PC Layout	39-158	May 15, 1979	B
Cartridge Board Assembly	39-167	May 15, 1979	B
Mattel Power Supply Board	39-125	May 15, 1979	H
P.S. Board PC Layout	39-159	May 15, 1979	B
P.S. Board Assembly	39-166	May 15, 1979	C
Logic Board Artwork	-	-	U
Cartridge Board Artwork	-	-	E



GENERAL INSTRUMENT CORPORATION  
MICROELECTRONICS  
600 WEST JOHN STREET, HICKSVILLE, N.Y. 11802  
(516) 733-3000

November 29, 1979

Mr. D. Chandler  
Mattel, Inc.  
5150 Rosecrans Avenue  
Hawthorne, CA 90250

Dear Mr. Chandler:

The following changes have been made to a new revision of the AY-3-8914 sound chip. These circuits are not yet in production, but are being fabricated for engineering evaluation at this time.

#### Frequency & Envelope Registers (R0-R7)

These counters have been modified to reset when the count is equal to or greater than the stored value in the register. This simplifies the software problems if the register contents are changed in a downward direction.

#### Enable Register (R10)

Bits 6 and 7 still exist however writing 'ones' into them no longer enables the two 8 bit ports into the output mode.

#### Amplitude Registers (R13, R14, R15)

Bit 5 no longer exists in these registers, bit 4 controlling the use of the envelope generator. This restricts the envelope generator to 16 levels. Should these three registers be READ during the program execution, bits 5, 6 and 7 will be indeterminate.

#### Output Ports A and B (R16 & 17)

Since these registers were only used to drive the two 8 bit parts, which are not used in the Mattel system, they have been removed along with the TTL compatible output drivers.