GTEK®, Inc. Model 705
68705 MPU Programmer
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Doc # 705MAN.PUB

I

Introduction

Congratulations. You now have what we believe to be the easiest to use and most cost effective Motorola 68705 programmer available. It couldn't be simpler to use. Simply insert the programmed 2732 (or 2764 in newer versions) and the 68705 to be programmed and press the copy button. A short time later it's done! LED sequence lights tell the story of the success or failure to program.

Some manufacturers have bought a number of 705s and are using them in a "gang" programming situation. They have a person load each 705 and press the copy button. When he runs out of 705s he goes back to the first one, which is done by then, and reloads it. Depending on the number of 705s he is using, the number of chips that can be programmed per hour might be in the hundreds.

Five units could theoretically allow 100 of the U3 or R3 parts to be programmed in an hour. Twice that many for the P3 chip.

II

Operating Instructions

Operation of the 705 is as follows:

1—Program a 2732 (or 2732A, 2732B, 27C32, 2764, 2764A or 27C64) with your program code, using an Eprom Programmer such as GTEK's model 7128, 7228, 9000, 7956 or 9800.

2—Insert the programmed 2732 into the 24 pin Textool socket on the model 705 marked "2732" with pin 1 in the upper left hand corner. Pin 1 of the sockets on the model 705 are marked with a silver dot if you have a 24 pin Textool socket. If you have a 28 pin Textool where the 2732 site is, you must insert a 2732 justified towards the bottom. Pin 12 of the 2732 will rest in the lower left hand corner with 4 empty pins at the top where pin 1 is. If you use a 2764 make sure that the lower half of the address space contains your code.

[NOTE: If you wish you can move the jumper on pin 2 inside the Model 705 on the 28 pin source eprom site to Vcc (through a 2.2K resistor) instead of ground, or even put a switch on it so that it can be either high or low to accomodate multiple programs.]

3—Insert an MC68705P3, P5, R3, R5, U3 or U5 into the appropriate 28 or 40 pin socket. Again, be sure that pin 1 of the part is at the end indicated by the silver dot. You can only program 1 MPU at a time. Be sure there is no other chip other than the one MPU and the 2732 (or 2764) in the programmer at one time. The other socket should be empty. Make sure that you close the handles on the Textool zif (green) sockets.

4—Press the button. The busy light should come on, indicating that the unit has applied power to the programming sockets. Do Not Remove or Insert parts while the busy light is on! If the busy light does not come on and stay on, it indicates that the 68705 may have a problem. Maybe you forgot to close the handles on the Textool sockets.

5—After approximately 1.5 minutes (28 pin P3 or P5 MPU's) or 3.0 minutes (40 pin R3, U3, R5 or U5 MPU's), the "Programmed" light should come on followed shortly (a few seconds) by the "Verified" light. The program light indicates the completion of the program cycle. The verify light indicates that the part was compared with the code in the 2732 (or 2764) and it compared perfectly. The "busy" light will go out by itself at the end of the cycle.

6—After removing the MPU chip, press the program button to turn off the "program" and "verified" lights. This is a desirable procedure to follow, so that there will not be any question as to whether you had "already pressed the button" the next time you want to program an MPU.

III

Calibration

The model 705 programmer uses a crystal timebase and the programming voltage is temperature compensated. It should therefore require no calibration. You may, from time to time, wish to measure the Vpp voltage on the programming pin of a 68705 while it is programming. It should be 21 volts + or — .25 volts. This voltage may be adjusted by the trim pot inside the unit.
On newer Model 705 programmers there is another pot. It's used to trim the VCC voltage on the unit. The new Vcc adjust pot is the one closest to the bridge rectifier and 7805 voltage regulator. While a chip is programming in the 28 or 40 pin socket adjust this pot so that there is approximately 5.00 volts on the Vcc pin of the chip that is programming. This voltage can vary by + or — .25 volts, but the closer to 5.00 volts on the Vcc pin of the chip, the better.

IV

Specifications

> Dimensions (HxWxD)
> 2.75" x 5.25" x 6.75"
> (70mm x 133mm x 171mm)

> Power requirements:
> 120vac, 60Hz, 10va
> 240vac, 50/60Hz optional

> Operating Environment:
> 45–95 F (7–35 C)
> 5 to 95% non–condensing relative humidity.

> Weight:
> 3.0 lb (1.4Kg)

V

Limited Warranty

GTEK, Inc. warrants to the original purchaser of this GTEK, Inc. product that it is to be in good working order for a period of one year from the date of purchase from GTEK, Inc., or an authorized GTEK, Inc., dealer. Should this product, in GTEK, Inc.'s optinion, malfunction during the warranty period, GTEK will, at its option, repair or replace it at no charge, provided that the product has not been subjected to misuse, abuse, or non–GTEK authorized alterations, modifications, and/or repairs.

Products requiring Limited Warranty service during the warranty period should be delivered to GTEK with proof of purchase. If the delivery is by mail, you agree to insure the product or assume the risk of loss or damage in transit. You also agree to prepay the shipping charges to and from GTEK.

All Express and Implied Warranties for This Product Including, But Not Limited To, The Warranties of Merchantability and Fitness for a Particular Purpose, are Limited in Duration To The Above one Year Period. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

Under No Circumstances Will GTEK, Inc. Be Liable In Any Way To The User For Damages, Including Any Lost Profits, Lost Savings, or Other Incidental or Consequential Damages Arising Out Of The Use Of, or Inability To Use, Such Product. Some states do not alllow the exclusion or limitation of incidental or consequential damages for consumer products, so the above limitation may not apply to you.

This Warranty Gives You Specific Legal Rights, and You May Also Have Other RIghts Which May Vary From State to State.

The limited warranty applies to hardware products only.

VI

Service

The only user servicable part in the 705 programmer is a line fuse, 1/2 amp @ 120 or 240 volts. If it blows, it may be an indication of some other problem.
For warranty and non–warranty service, contact GTEK, Inc. at:

GTEK, Inc.
RMA #####
399 Highway 90
Bay St. Louis, MS 39520

Be sure to include the RMA number (Return Material Authorization) on and in the package so we will know what to do with it. Out of warranty service charges are determined on an hourly labor plus materials basis.

Correspondence should be directed to:

Technical Sales Manager
GTEK, Inc.
P. O. Box 2310
Bay St. Louis, MS 39521–2310