REGNECENTRALEN (UK) LTD

8/16 BIT RC855 MULTI-FUNCTION WORKSTATION

RC (UK) LTD 8/16 HARDWARE UPGRADE

INSTALLATION
INSTRUCTIONS

REGNECENTRALEN (UK) LTD

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SECTION 1 PURPOSE OF THIS DOCUMENT

1.1 PURPOSE

This Document is intended to enable a Competent and Qualifed Field Engineer to Upgrade an RC855 MFWS System with a 60 Hz Monitor to operate with the RC (UK) Ltd. version of the Intel 8088 Co-Processor Feature supporting 256 K Bytes of Random Access Memory. The Upgrade is based on the use of the RC (UK) Co-Processor Upgrade Kit which is listed in Section 1.2 below.

1.2 CONTENTS OF THE UPGRADE KIT

You should check carefully that the Upgrade Kit you are proposing to Install contains the following items and that you can identify them all.

1 X   Daughter Board (PCBA)
1 X   Intel 8088 Processor Board with 256 KB RAM (PCBB)
      pre-mounted on metal bracket.
1 X   Plug Ended 16 Wire Bus Inter-Connect Cable (Bus Cable)
1 X   PCBA Power Cable (Power Cable)

SECTION 2 LOCATION OF COMPONENTS

2.1 Location of the Daughter Board (PCBA)

PCBA Plugs into the Socket on the RC855 MFWS Micr-Processor Board (Position 62) after the removal of the Z80A Processor.

2.2 Location of the Co-Processor Board (PCBB)

PCBB is mounted onto the side of the 60 Hz Monitor assembly on the Right Hand Side when the Workstation is viewed from the rear.

2.3 PCBA to PCBB Interconnect

PCBA and PCBB are Interconnected using the BUS Cable.

2.4 Power Supply

Power is supplied to PCBB from the RC855 MFWS PSU via the Power Cable.

SECTION 3 INSTALLATION PROCEDURE

STEP 1 Disconnect and Strip Down RC855 MFWS

Ensure that the Workstation is powered of then Disconnect all power and data cables.

Remove Cover

Disconnect and remove the MIC 50X Main Micro-Processor Board

STEP 2 Install PCBA and Re-install the Z80A Processor

Remove the Z80A Micro-Processor from the MIC 50X Board (position 62) and install it in position U2 on PCBA (Pin 1 to Pin 1).

Install PCBA on the MIC 50X Micro-Processor Board in position 62 (pin 1 to pin 1).

STEP 3 Remove the Monitor Assembly

Disconnect all Power and Data Cables from the Monitor Assembly.

Remove the four (4) Allen Screws, located on the underside of the swivel case which hold the Monitor in place and remove the monitor assembly from the RC855 MFWS Workstation.

STEP 4 Install PCCB on Monitor Assembly

PCBB is mounted on the Right Hand Side of the Monitor Assembly when viewed from the rear.
Slacken off the two (2) screws holding the side plate of the monitor assembly to the assembly base plate.
Mount PCBB onto the side plate with the lip over the top of the side plate, and the slots in the bottom behind the screw heads in the side plate. Tighten these two (2) screws.

STEP 5 Re-Install the Monitor Assembly

Insert the plug on one end of the BUS cable into the
socket at position U17 on PCBB (pin 1 to pin 1).

Re-install the Monitor Assembly into the RC855 MFWS
using the four (4) Allen screws removed during step 3
above. Check that there is clearance between the PCBB
and the outer case of the RC855 MFWS, on some of the
terminals it may be necessary to enlarge the holes in
the bottom of the casing to achieve this.
Check that it is postioned to allow the
Workstation Cover to be refitted.

Re-connect all cables to the monitor assembly.

STEP 6 Check The PCBB Power Supply Lead

Power for PCBB is taken from Connector J4 of the Main Micr-
Processor Board (MIC 50X).

+5 V DC is taken from Pin 7 of Connector J4.

0 V DC is taken from Pin 8 of connector J4.

The +5 V DC Lead in the Power cable Supplied with the
Upgrade Kit has the **SMALLER** of the two spade connectors.

STEP 7 Re-Mount the Main Processor Board Complete All Connections

Re-mount the Main Processor Board in the Down Position.

Connect the Power Cable Supplied with the Upgrade kit to the
pins on Connector J4 of the Main Processor Board. Attach the
spade connectors of the Power Lead to PCBB.

Connect the BUS cable Plug (pin 1 to pin 1) to PCCA (now
Mounted on the Main Processor Board).

Re-Install the Main Processor Board in the RC855 MFWS.

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STEP 8 Pre-Completion Check

Before re-installing the cover attach the
Workstation Peripheral Devices (Keyboard, F/Disc Drive and
Printer) and check for normal operation under CP/M 2.2.

STEP 9 Post-Completion Check

Re-Install the Workstation Cover and run the TOTEM test
pack.

STEP 10 RC (UK) 8/16 Bit Operating System Check

Use the RC (UK) Ltd. CP/M 86 Operating System as described
in the User Guide to check that the 8/16 Bit RC855 MFWS
is functioning normally.

THE 8/16 BIT RC855 MULTI-FUNCTION WORKSTATION IS READY FOR SERVICE

CHECK YOUR RC(UK) Ltd. DISTRIBUTION DISK

Power on the Workstation, the F/Disc Drives, and the Printer (if available).

After the Self-Check Cycle the System Load Prompt will appear:

ITT 3290 - Insert diskette

Load your CP/M System Disc into Drive A

The screen message will change briefly to:

ITT 3290   LD

and the CP/M Sign-on Message and Prompt will appear:

ITT 3290 CP/M 56K rel 1.X (or 2.X)

A>_

Your Distribution Disc as delivered contains two files in addition to your package:

CRC   .COM
CRCKLIST   .CRC

The **CRC.COM** file is a CP/M utility which enables you to rapidly verify that the **Distribution Disc** contains a good copy of your package.

When your **Distribution Disc** was made, the last part of production was to write the file **CRCKLIST.CRC** which contains check values of the data on the disc.

Before leaving RC (UK) Ltd. your disc was checked, however before transferring the files, it is advisable to run the CRC program to check that no damage has occured after the disc was dispatched to you.

This is accomplished by following the next procedure.

Your workstation should be displaying the CP/M prompt

A>_

Type: **B:<RETURN>** Key

This changes the CP/M logged drive to disc B
The screen will now look like this:

B>_

Before proceeding to the next step check that your printer is on line and ready:

Type <PRINT> Key

TypeCRC<RETURN> Key

Your screen should look like this example from the TCP package:

```
CRC Ver 5.0
CTL-S pauses, CTL-C aborts
++Searching  for  CRCKLIST file++ Checking with file  -  CRCKLIST.CRC

TCP  .COM - XX XX "Match"
CRC  .COM - XX XX "Match"

DONE
Quantity of file CRC that matched - 2
B>_
```

and your printer will have printed the same

If your screen looks the same as above except that the XX XX will be another HEXADECIMAL number, your Distribution Disc is undamaged and you may use the package.

If your screen looks like this:

```
CRC Ver 5.0
CTL-S pauses, CTL-C aborts
++Searching  for  CRCKLIST file++ Checking with file  -  CRCKLIST.CRC

TCP  .COM - YY YY <-- is, was --> XX XX
CRC  .COM - XX XX "Match"

DONE
Quantity of file CRC that matched - 1
Quantity of file CRC that did not match - 1
B>_
```

Then your Distribution Disc is damaged and should be returned to your Dealer together with a copy of the printout and your dealer will supply a new Distribution Disc.

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