Date: **August 23, 1999**

Subject: **CONVERT TO 1125/24sFP, 50i**

Model: **HDM-20E1U**

Serial No: **ALL**

DESCRIPTION

To convert an HDM-20E1 monitor to 1125/24sFP, 50i, perform the following procedures.

NOTE:

- The deflection data of 24sFP and 50i are saved in 1125/1035 and 1125/1080 areas, respectively.
- With this modification, the synchronization with signals other than 24sFP and 50i fails.
- 24sFP system is CDR.

PARTS REQUIRED

Part No.	Description	Qty.
1-102-820-00	Cap, 330pF	2
1-163-259-91	Cap, 220pF	2
1-136-828-11	Cap, 1.8µF/200V (C43, C44)	2
1-136-081-00	Cap, 0.012µF/1200V	2
1-216-681-11	Res, 18kΩ	1
1-216-695-11	Res, 68kΩ	1
1-216-697-11	Res, 82kΩ, R2035	1
1-216-677-11	Res, 12kΩ, R2038	1
1-208-810-11	Res, 15kΩ	1
1-163-127-00	Cap, 270pF	1

MODIFICATION PROCEDURE

E Board

CDF

CDF: Constant Data Format—number of samples per line is constant

1. Solder a 330pF capacitor in parallel with C2016 (side B, zone B-6). (Changes H lock-in range of IC2007 TDA9102C.)
2. Solder a 220pF capacitor in parallel with C708 (side A, zone A-3). (Changes free-running frequency of IC701 FA5301.)
3. Replace the two capacitors mounted in location C43 (side B, zone G-3) with two1.8µF/200V (1-136-828-11) capacitors.
4. Install a jumper across R714 (side A, zone B-3). (Disables ASPECT2.)

CDR

CDR: Constant Data Rate—sampling frequency is constant

1. Solder a 330pF capacitor in parallel with C2016 (side B, zone B-6). (Changes H lock-in range of IC2007 TDA9102C.)
2. Solder a 220pF capacitor in parallel with C708 (side A, zone A-3). (Changes free-running frequency of IC701 FA5301.)
3. Install a jumper across R714 (side A, zone B-3). (Disables ASPECT2.)
4. Replace C5202 with a jumper wire (side A, zone F-6). (Deletes resonance capacitor circuit.)
5. Remove Q3 (side A, zone F-6). (Deletes resonance capacitor circuit.)
6. Solder two 0.012µF/1200V capacitors in parallel with C008 (side B, zone E-1). (Changes resonance capacitor.)
7. Solder a 18kΩ resistor in parallel with R701 (15kΩ) (side A, zone B-3). (Changes adjustable range of H SIZE.)

8. Solder a 68kΩ resistor in parallel with R2027 (68kΩ) (side B, zone A-6). (Changes adjustable range of H PHASE)
9. Replace R2035 (15kΩ) (side A, zone C-2) with an 82kΩ resistor. (Changes adjustable range of H BLK W)
10. Replace R2038 (4.7kΩ) with a 12kΩ resistor (side A, zone D-2). (Changes adjustable range of H BLK W)

D Board

(Both CDF and CDR)

Solder a 15kΩ resistor in parallel with R869 (side A, zone A-7). (Changes adjustable range of H BLK PHASE)

PA Board

(Both CDF and CDR)

Solder a 270pF capacitor in parallel with C504 (side B, zone B-1). (Changes free-running frequency of IC501 FA5301)

SOFTWARE INSTALLATION

PARTS REQUIRED

Part No.	Description	Qty.
MHDMOS24P	V1.10B2 SRAM card	1

1. Insert version 1.10B2 SRAM card into control panel.
2. Turn on main switch at rear.
3. After confirming that STANDBY LED blinks slowly, press POWER button of control panel.

   The STANDBY LED now blinks more rapidly.
4. After five minutes, the unit is automatically powered up and version upgrade is complete.

ADJUSTMENT/CONFIRMATION

1. Input a 24sFP or 50i crosshatch signal and adjust V OSC as described in maintenance manual section 5-2-2.
2. Adjust picture geometry.
3. Verify correct convergence and white balance. Adjust if necessary.

ORDERING INFORMATION

NOTE: To order upgrades or for regional service center and parts ordering information, refer to the following document, which lists all contact telephone numbers:

Technical Bulletin *001999000*