

Date: **August, 1989**

Model: **APR-24/5003V**

Serial No: **10,001-10,105 (APR-24)**
10,001-10,500 (APR-5003V)

Subject: **EXCESSIVE PUNCH-IN/PUNCH-OUT
NOISE**

DESCRIPTION

Some units may exhibit excessive punch-in/punch-out noise. To correct this problem, modify the MST Board and all CNL Boards as described in the following procedure.

Units with the following serial numbers are factory modified.

APR-24: 10,106 and higher

APR-5003V: 10,501 and higher

APR-24 PARTS REQUIRED

Part No.	Description	Qty.
1-231-409-11	Res, Pack, SIP, 5.6k, 9-pin	6
1-214-575-11	Res, 5.6k, 1/8W, 1%	6
1-162-747-21	Cap, 56pF	6

APR-5003V PARTS REQUIRED

Part No.	Description	Qty.
1-231-409-11	Res, Pack, SIP, 5.6k, 9-pin	2
1-214-575-11	Res, 5.6k, 1/8W, 1%	2
1-162-747-21	Cap, 56pF	2

MODIFICATION PROCEDURE

1. Turn unit power OFF.
2. Remove Master Board (MST or MST1) from card cage. (For instructions, refer to applicable Operation and Maintenance Manual.)
3. Replace RN4 with 5.6k SIP resistor pack.
4. Replace R57 with 5.6k resistor.
5. Replace C66 with 56pF capacitor.
6. Reinsert MST Board into card cage.

7. Remove a CNL Board from card cage.
8. Remove heat sink plate from CNL Board.
9. Install CNL Board on extender card and insert into CNL Board slot.
10. Turn power ON.
11. Load bulk-erased tape onto unit.
12. Connect line out of Channel 1 to oscilloscope.
13. Attach oscilloscope probe to EXT trigger input of oscilloscope.
14. Attach oscilloscope probe to IC23-8 of CNL Board.
15. Adjust oscilloscope timing to 5mS/div.
16. Adjust Channel 1 sensitivity to 50mV/div.
17. Select NORMAL and EXT for trigger source.
18. Press RECORD READY for channel under test.
19. Alternate pressing PLAY, then RECORD, continuously at one-second intervals.
20. Adjust oscilloscope trigger until Punch-in/Punch-out transient is easily detectable.
21. Adjust RV4 on CNL CW or CCW for minimum transient level (just visible peak-to-peak).
22. Ensure maximum level peak-to-peak does not exceed 100mV.
23. Remove oscilloscope probe from IC23-8 of CNL Board.
24. Turn power off.
25. Remove CNL Board and extender card from CNL slot.
26. Remove CNL Board from extender card.
27. Reinstall CNL heat sink plate.
28. Reinsert CNL Board into card cage.
29. Repeat steps 7 through 28 for each CNL Board.