



Consumer Product Service
Manager of Technical Support
TECH TIP

HCD
number 9

MODEL: 410 Cassette Recorder

DATE: February 9, 1983

SUBJECT:

410 Cassette Recorders that register #143 error codes.

DESCRIPTION:

The following procedures and checklist may help to correct problems signified by #143 error codes.

HEAD ALIGNMENT PROCEDURE

1. Connect the suspected bad recorder to your 400 system.
2. Check for the following component modifications in the Chelco unit only. These should already be present in the Transtek unit.

R105	50 Ohms
R112	56K
R109	58K
C100	50pf
C107	50pf

If the values of the components on the unit are not correct, replace them.

3. Clean the head and tape drive rollers. Check for stretched/worn belts.
4. Place the Test Tape in the unit.
5. a. Put scope probe on A101, Pin 11 (refer to Head Alignment procedure of Section IV of the Field Service Manual).
b. Type: POKE 54018,52 (turns motor on without error or actual load)
Press: RETURN (on computer)
This allows the tape to run continuously when PLAY is pressed on the recorder.
Press: PLAY (on recorder)
c. Adjust head-adjust screw clockwise or counter-clockwise and look for a signal of 300MV or greater (The manual's reference to a 50MV signal is incorrect and will be corrected in the next revision of the manual.) Refer to Figures 1 and 2 on the following page for examples of waveform patterns before and after head alignment. (If signal stops, rewind tape and press PLAY again. Repeat procedure as necessary until alignment is complete.)



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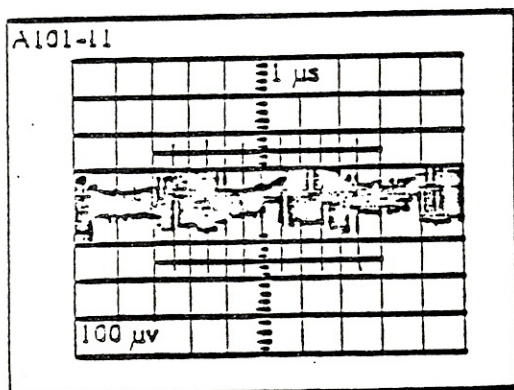


Figure 1. Output Signal
of the Preamplifier
Before Head Alignment

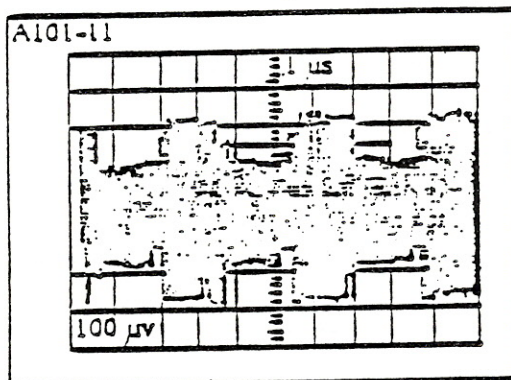


Figure 2. Output Signal
of the Preamplifier
After Head Alignment.

6. Replace unit into covers.
7. Rewind tape.
8. Type: CLOAD
The tape should load.
9. a. Use a blank tape.
b. Rewind.
c. Type: CSAVE
When READY appears, rewind and type CLOAD and press RETURN.
READY should appear when the tape stops running. The program should execute upon receiving the correct command.
d. Reassemble if no errors are found.



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HEAD ALIGNMENT SYMPTOM CHECKLIST*

<u>SYMPTOM</u>	<u>PROBABLE CAUSE</u>
1) Alignment procedure O.K., signal at pin 11 of A101 O.K., but 410 errors on CLOAD.	I/C LM324
2) No signal at Pin 12 of A101. Unit CLOADS O.K., but will not CSAVE.	PB/Rec Head
3) Will not CSAVE or CSAVE Intermittent.	C117
4) No audio.	A101
5) Signal on Pin 6 Or 2 of A100 incorrect. Note: signals may also be seen on Pins 7 and 1 of A100.	Poly capacitors 320pf before LM324
6) Door won't close : physically broken at hinge area or missing spring clips on inside of door.	Replace door
7) Play button not staying engaged, record button not engaging (broken record detector). Tape jamming or bad rewind.	Replace tape deck
8) Cassette tension spring loose or weak.	Replace or reposition springs in the door. Replace or reposition rear spring holding cassette into head.

*Symptom and probable cause are listed with most common failure first.

DIFFICULTY REPORTING

If you have questions or need further assistance, call the Atari Techline Specialist:

Inside California
(800) 672-1466

Outside California
(800) 538-1535