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Installation Notes for URSA CRT 7M514P46, 7M560P46, 7M561P46

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NOTE: Read and familiarize yourself with the entire instruction set before starting installation of your new URSA Tube.

Thomas Electronics' 7M514P46 is a direct bolt up to the existing demountable coil package of any version URSA telecine. Electrical and mechanical spec makes this CRT directly interchangeable with original equipment CRT's.

Thomas does not prealign the beam with taped on magnets. We do supply a standard beam alignment ring that will install on the CRT neck and can easily be aligned in the machine to insure optimum beam alignment. Use the notes below to guide your alignment using the supplied alignment ring assembly.

1. The 2 magnetized rings on the Alignment Magnet Ring Assembly have 4 tabs each, 2 rounded and 2 squarish tabs on each of the two rings. When the round and square tabs are positioned on top of each other, the magnetic fields should cancel for minimal magnetic correction to the beam centering position. Align them this way before installing on the tube neck.
2. Install CRT in the usual manner within the demountable coil package according to original manufacturer's instructions. Reuse the existing Mu-Metal shield from the original package on the New Thomas Electronics CRT making sure all ground wires are correctly connected.
3. Once the CRT is in the coil assembly, install the Ring Magnet Assembly on the CRT neck. Adjust the clamp so the assembly slides on and is a snug fit to the neck glass. Assembly should be installed approximately 2" from the upper edge of the molded base connector cap.
4. Install the Mounted CRT assembly in the machine in the correct and normal way. Make sure all existing cables are connected except for the neck base connector (Blanking Board) and HV lead. Connect Scandal and Scan, cables.
5. Connect Extender Cable between CRT neck base and CRT blanking board. Make sure the blanking board is not touching any conductive surfaces. Tape on temporary insulation material if you feel there may be a shock hazard or potential short circuit condition. Use caution as Blanking board will have high voltages on it when powered up. Extender cable is used only during initial beam alignment.

6. Install supplied HV Adapter in place of the Threaded Cylindrical portion of the Brandenburg HV PSU connector. Thomas Electronics HV Adapter will connect directly to the Brandenburg threaded connector on the end of the HV lead from the HV PSU. Make sure it is tight for a good leak free seal.
7. Insert the Jettron connector of the HV lead from the CRT in to the small end of the HV Adapter. Screw the Red Plastic Nut on to the HV Adapter and make a good tight seal.
8. Set up a video monitor behind the machine and connect the BNC feed to the Pix Mon output of the machine.
9. Power up the machine and take normal precautions on initial enabling of EHT.
10. Once EHT is on, place a SMPTE AR or DEL resolution chart in the gate and view the image on the PIX Mon behind the machine. Either program the Color Corrector to rock through focus or do this manually to look for beam alignment problems. If the electron beam is not passing directly through the center of the field of the focus coil, varying the focus voltage will cause a raster deflection as well as focus change. Rotate and adjust the relative positions of the two rings on the Ring Magnet Assembly until no deflection or X-Y movement occurs with a change in focus voltage. This indicates the electron beam is correctly centered in the Focus Coil field.
11. Shut down EHT and power down the machine, remove the Extender Cable and install the blanking board normally to the base connector on the CRT. Install the half round end piece on the Coil package to complete the mechanical installation. Scandal equipped machines will have the Scandal connector mounted on this part.
12. Perform Scan alignments as per normal installation for all gates.
13. **Important Note:** The Deflection Coil on a standard assembly is oftentimes not centered in the slots on the coil package. These slots are there to adjust the coils for optimum rotation alignment. Current through the focus coil will actually introduce a slight beam rotation and slight rotation of the deflection coils was often done to compensate. However, oftentimes this mechanical alignment is overdone beyond what is needed to create a neutral rotation bias in the Skew Adjustments during Scan Align (Engineering Setup of URSA Scans). We have found in the field that loosening the three allen cap bolts that hold the deflection coil in place and rotating the coil midway between the existing setting and the center of the slot position is just enough to bring the alignment in to more neutral rotation setting. Thomas Electronics CRT requires less current drive for good focus than original equipment and you may find you are unable to get properly lined up X and Y Skew Settings unless you do this simple mechanical adjustment. Once you have done this, you will still be well within normal range for original CRTs, in fact closer to the correct X and Y Skew center point for all CRTs. The Deflection Bolts are the only ones mounted on slots and are located towards the front end of the "Stovepipe" portion of the coil package (close to the widened portion that accommodates the bell and housing of the CRT). One of the three screws may be hidden under a clamp for the cable assembly strapped to the coil package. Tighten these screws after adjusting their positions.

If you have any questions or problems, please call Dave Corbitt at Thomas Electronics, Wayne, NJ.

Best regards

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