This checklist is a guide for setup, examination, and post-examination activities using the MX3 PAUT instrument. It is an information supplement to assist the Level II or III who is setting up or examining material or components using the MX3 and PAUT, and its use does not create a record. In the event of apparent conflicts between this document and the governing LANL PAUT procedure, the procedure takes precedence.

MX3 Pre-Examination Checklist (Before Initial Scanning)

	CHECKPOINTS	NOTES
1	Verify Scan Plan Matches the Part Being Tested	
2	Probe Type and Wedge Verified to Match Scan Plan	
3	Set Initial Skew Angle (90 or 270) for **each group**	
4	Initial Index offset positions for **each group**	Weld centerline to front of wedge
5	Part details verified	Thickness, Velocity/Material, Weld Overlay
6	Verify Focal Laws for **each group**	
7	UT Settings Verified for each group (Pulser & Receiver settings)	Voltage, PRF, Filters, etc.
8	800% Mode set to “ON”	Prevents saturation on high amplitude signals (e.g., LOF)
9	Display Overlays “ON”	Weld, Legs, etc.
10	Wedge and Sensitivity Calibrations verified for **each group**	
11	UT Range set for **each group**	Start with 3T @ Min Angle
12	Perform Code Calibrations (TCG/DAC) for **each group**	
13	Set Scanning Gain for **each group**	+6dB over reference
14	Set Gate Position and Threshold for **each group**	Cover 1st & 2nd leg, half of 3rd
15	Readings List set as Desired	A%, DA, PA, SA – I(m-r), S(r), S(m-r), U(m-r)
16	Display to A-C-S	
17	Turn on Encoder and verify Polarity	Set scan speed to between 2 and 3 ips
18	Set Scan Resolution	0.0394”
19	Encoder Calibration or Verification	1% error over minimum of 20”
20	**!!! SAVE THE SETUP FILE !!!**	
21	Set Scan Area	
22	Set/Verify Encoder Origin	
23	Position Probes on the part at Specified Index Offsets	
24	Press Play to Reset / Clear Data and Scan with Multi Group Display	

MX3 Examination Checklist (Between Scans)

	CHECKPOINTS	NOTES
1	Freeze/Pause Data	
2	Check Scan Quality in C-Scan (loss of data, coupling issues, improper indexing)	
3	**!!! SAVE DATA !!!**	
4	Verify/Change Skews and offsets in **each group**	
5	Verify Range, Gate, and dB for **each group**	
6	Reset Display to A-S-C if previously changed	
7	Verify Scan Area if changed	
8	Verify Encoder origin if changed	
9	Re-set / Clear Data and Scan with Multigroup Display	

MX3 Post-Examination Checklist (Evaluation)

	CHECKPOINTS	NOTES
1	Open Data File	
2	Turn Display to ABSC	
3	Starting at the minimum angle, scroll through all angles or VPAs, and monitor the B-scan	
4	Position Data Cursors over Indications found in B-scan	
5	Evaluate the Indication in S and A views	
6	Analyze Indications using the S-scan and A-scan for characterization and location	
7	Observe flaw in other groups for verification and position information	
8	Determine the flaw height and length in view with the best signal response	
9	Add Indication to table when display is as you want reported	
10	Repeat 3-9 until complete for all beam angles and groups	
11	Save final indication table and report	

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