START HERE
BLANK SCREEN?

IS THE PICTURE TOO SMALL? — NO →

IS THE PICTURE PERFECTLY STABLE? — NO →

YES ↓ (Blank Screen)

F901 — BLOWN → **LIKELY A SHORTED HORIZONTAL OUTPUT TRANSISTOR (HOT) AT X01.**

CHECK HOT WITH DIODE TEST ON MULTIMETER.

ALTERNATIVELY USE OHMS/CONTINUITY. CONNECT BLACK METER LEAD TO CHASSIS AND RED LEAD TO CASE OF HOT. OPEN OR HIGH RESISTANCE IS GOOD, SHORTED IS BAD.

CHECK FLYBACK TRANSFORMER

CHECK CAREFULLY FOR CRACKS IN THE CASING AND/OR BURN MARKS.

F901 OK ↓

F902 — BLOWN → **LIKELY SHORTED DIODES OR DEGAUSSING COIL**

RECTIFIER DIODES	
D901	D902
D903	D904

RARE, BUT DIODES CAN BE DAMAGED IF MONITOR WAS OPERATED WITHOUT AN ISOLATION TRANSFORMER.

DEGAUSS COIL
T2/I1 (UNPLUG)

DEGAUSS COIL MAY RUB ON FRAME AND CAUSE SHORT

F902 OK ↓

CHECK THE REGULATED POWER SUPPLY AT RESISTOR R1 (220Ω 25 WATT LARGE WHITE CERAMIC HANGING ON THE SIDE OF THE CHASSIS.)

220Ω 25W

THE TERMINAL CLOSEST TO THE CRT (WHITE WIRE) SHOULD MEASURE +120 VDC.

OK → **TURN UP THE SCREEN CONTROL ON THE FLYBACK TRANSFORMER.**

DO YOU SEE THE RASTER?

(JUST A WHITE SCREEN WITH DIAGONAL LINES RUNNING THROUGH IT)

YES ↓ **CHECK TRANSISTORS X303 AND X304.**

NO ↓ **IS THE CRT NECK HEATER GLOWING?** — NO → **OPEN CRT HEATER CIRCUIT.** CHECK FOR PCB CRACKS AND COLD SOLDER JOINTS.

IS THE PICTURE SHRUNKEN/COLLAPSED?

YES → **YOU LIKELY HAVE A VERTICAL DEFLECTION PROBLEM.**

VERTICAL OUTPUT TRANSISTORS	
X401	X402

FUSIBLE RESISTOR
FR401 (SHOULD BE 68Ω, NOT OPEN)

SYNC PROCESSOR
IC501 (RARE)

CHECK ALL 400'S

NO ↓

IS THE PICTURE WAVING OR SHAKING (DOING A "HULA" DANCE)?
SIDES OF THE SCREEN MAY BE MOVING IN AND OUT IN A WAVE PATTERN UP OR DOWN THE SCREEN.

YES → (CHECK THE REGULATED POWER SUPPLY)

NO ↓

IS THE PICTURE ROLLING FROM TOP TO BOTTON?
(UNABLE TO LOCK *VERTICAL* HOLD)

NO → **IS THE PICTURE SHIFTING LEFT TO RIGHT?**
(UNABLE TO LOCK *HORIZONTAL* HOLD)

YES ↓ **VERTICAL SYNC PROBLEM**

VERTICAL SYNC TRANSISTORS	
X302	X306

SYNC PROCESSOR
IC501

YES ↓ **HORIZONTAL SYNC PROBLEM**

HORIZONTAL SYNC TRANSISTORS	
X301	X305

SYNC PROCESSOR
IC501

TOO MUCH COLOR? MISSING A COLOR? — NO → **SCREEN TOO BRIGHT (BRIGHT WHITE)?**

YES ↓ **CHECK COLOR TRANSISTORS ON MAIN PCB AND NECK BOARD PCB.**

COLOR TRANSISTORS		
	RED	GREEN	BLUE

	RED	GREEN	BLUE
MAIN PCB	X101 X102	X103 X104	X105 X106
NECK PCB	X102	X103	X101

SCREEN TOO BRIGHT (BRIGHT WHITE)?
YES ↓ **CHECK BEAM LIMITER TRANSISTOR X303.**
NO → **IS THE PICTURE DISTORTED/CURVED?** — YES → **ELECTROLYTIC CAPACITOR FAILURE.** THE MOST COMMON MONITOR PROBLEM. IT IS RECOMMENDED TO REPLACE ALL ELECTROLYTIC CAPICITORS.

(From power supply R1)

LOW ↓ **CHECK THE VOLTAGE AT THE OPPOSITE END OF R1.**

IS VOLTAGE APROXIMATELY +145 VDC?

LOW ↓ **ALTHOUGH RARE, CHECK FILTER CAPACITOR C904.**

0 VDC ↓ **CHECK R902 (MAY BE OPEN). CHECK FOR PCB CRACKS AND COLD SOLDER JOINTS IN THE AREA.**

+145 VDC → **UNSOLDER AND REMOVE TRANSISTOR X701. DOES MONITOR WORK NOW?**

HIGH → (UNSOLDER AND REMOVE TRANSISTOR X701)

WORKS ↓ **LIKELY A VOLTAGE REGULATOR FAILURE. TEST VR FOR SHORTS. TEST C511 AS IT IS A COMMON FAILURE POINT. TEST ALL 900'S.**

+160 VDC → **YOU LIKELY HAVE A HORIZONTAL DEFLECTION FAILURE.**
CHECK FOR PCB CRACKS AND COLD SOLDER JOINTS, PAY CLOSE ATTENTION TO THE AREA AROUND THE FLYBACK.

NONE FOUND ↓ **MEASURE THE VOLTAGE AT THE METAL CASE OF X01.**

0 VDC → (back to horizontal deflection failure)

+160 VDC ↓ **CHECK TRANSISTOR X501. CHECK IC501 (SUBSTITUTE FROM ANOTHER CHASSIS IF AVAILABLE). CHECK TRANSFORMER T501.**