

## ACKNOWLEDGEMENTS

**ABSTRACT****Knowledge-Based Expert System For Diagnostics  
And Repair Of Consumer Electronics**

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This project presents a knowledge-based expert system solution to the problem of diagnostics—troubleshooting and repair, of the SHARP television models 19B66A, 19B70A and 19B74A.

The developed knowledge-based expert system, entitled SHARP 1, has identified the five most commonly occurring problem areas in the selected television models. It provides a step-by-step detailed description of the full remedial action to be taken to completely eliminate the faults and restore the television set to working condition. The knowledge base consists of technical information of operations manuals and television servicing integrated with the field experience and expertise of a human expert.

SHARP 1 was developed using the INSIGHT 2+ expert system developmental tool, and is executable on an IBM AT compatible micro-computer with 256 Kbytes RAM, two 3 1/2 inch 1.44 Mbyte floppy drives, and an MS-DOS (version 2.0 or later) operating environment. In the design of SHARP 1, due consideration was taken of the needs of its target user groups of novice and student electronics technicians, experienced electronics technicians, educational institutions, as well as novice knowledge engineers.