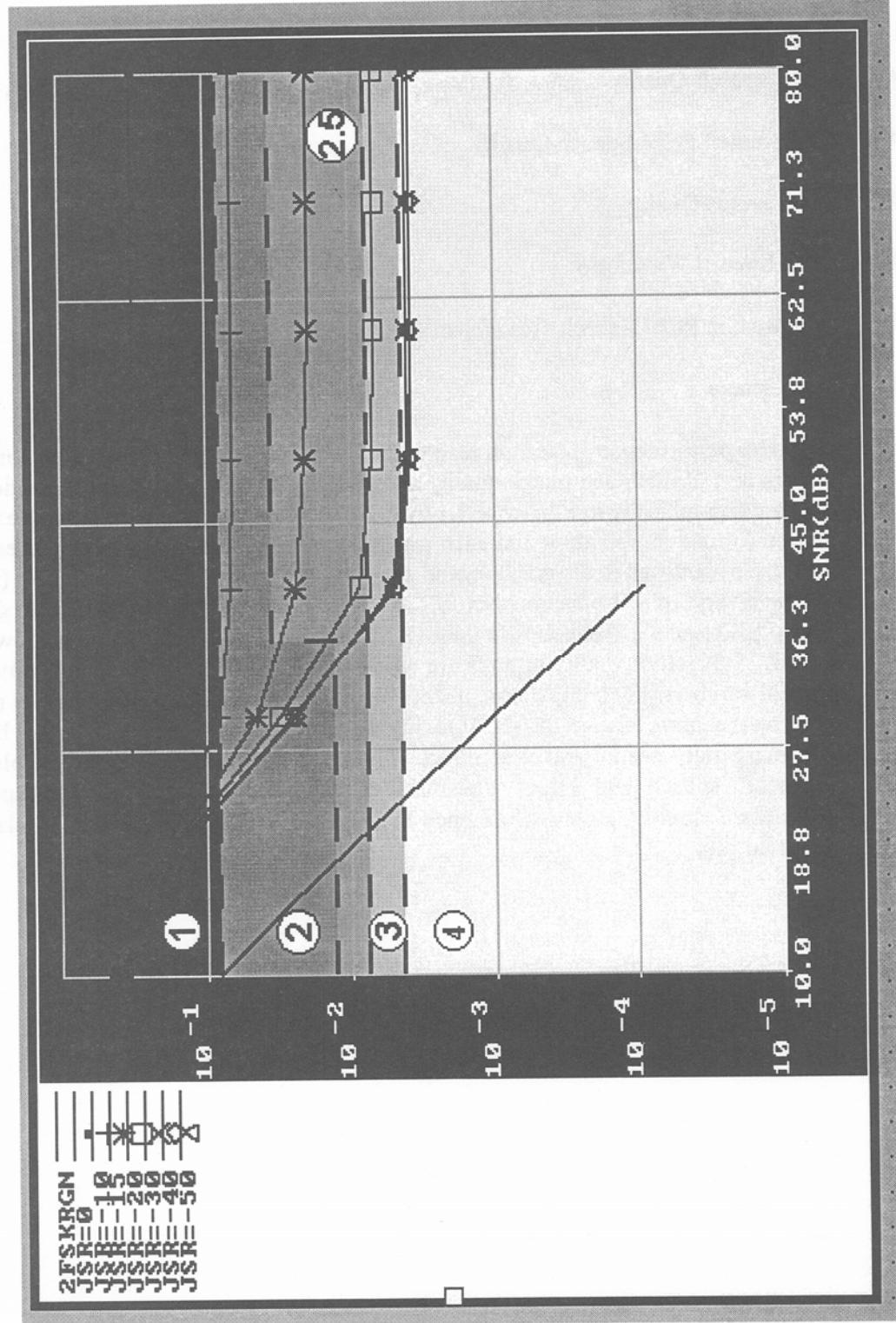


APPENDIX

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This Appendix includes performance prediction results for the radio links and information formats described in the main text. Speech and image quality and symbol error rate (SER) as a function of SNR and SIR are shown graphically in Figures A.1.1 to A.3.8. Each graph represents a unique radio link and information format combination and each graph curve represents a distinct interference level. Interference levels identified in the graph legend are in units of jamming-to-signal ratio (JSR) in dB. The JSR is the inverse of SIR which makes JSR in dB the negative of SIR in dB. The graph ordinate is in units of SER and the abscissa is in units of SNR in dB. Non-Gaussian noise power is not included in SNR. Subjective quality regions are represented by different shades of gray and identified with circled numbers. For comparison, results for 2-FSK and 2-DPSK in Gaussian noise alone are displayed by the curve labeled "RGN." Quality measures range from 1 to 5 with 1 being undecipherable, 2 marginally useful, and 5 excellent. Figures A.4.1 to A.6.8 show examples of "marginal" and "best" speech and image transmission. Marginal performance corresponds approximately to class 2 quality. Best performance may be anywhere from class 3 to class 5 depending on the radio link.



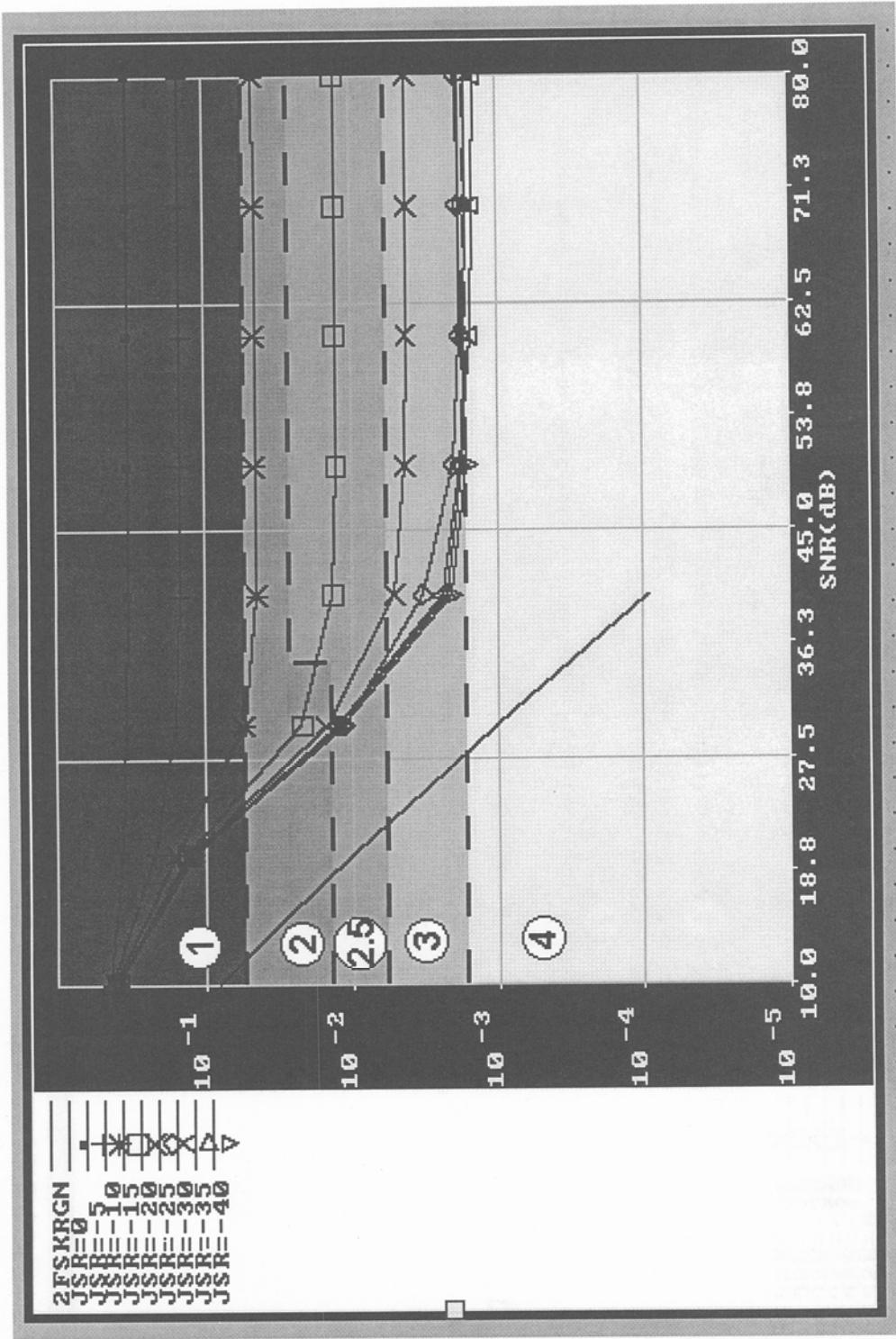


Figure A.1.2. PCM speech quality for 2-FSK with FEC and interleaving. Circled numbers represent quality class and ordinate is in units of SER.

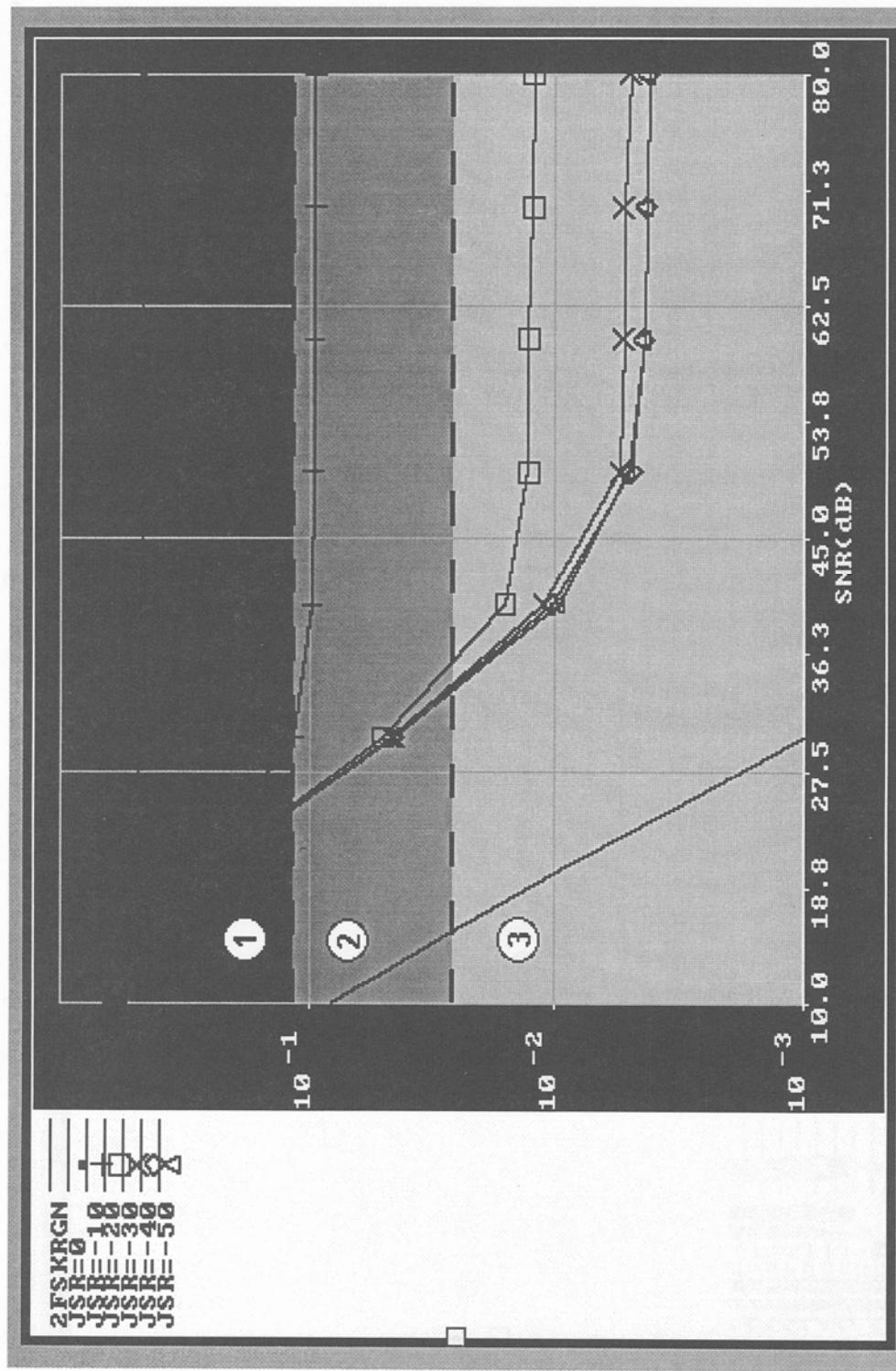


Figure A.1.3. PCM speech quality for 4-FSK. Circled numbers represent quality class and ordinate is in units of SER.

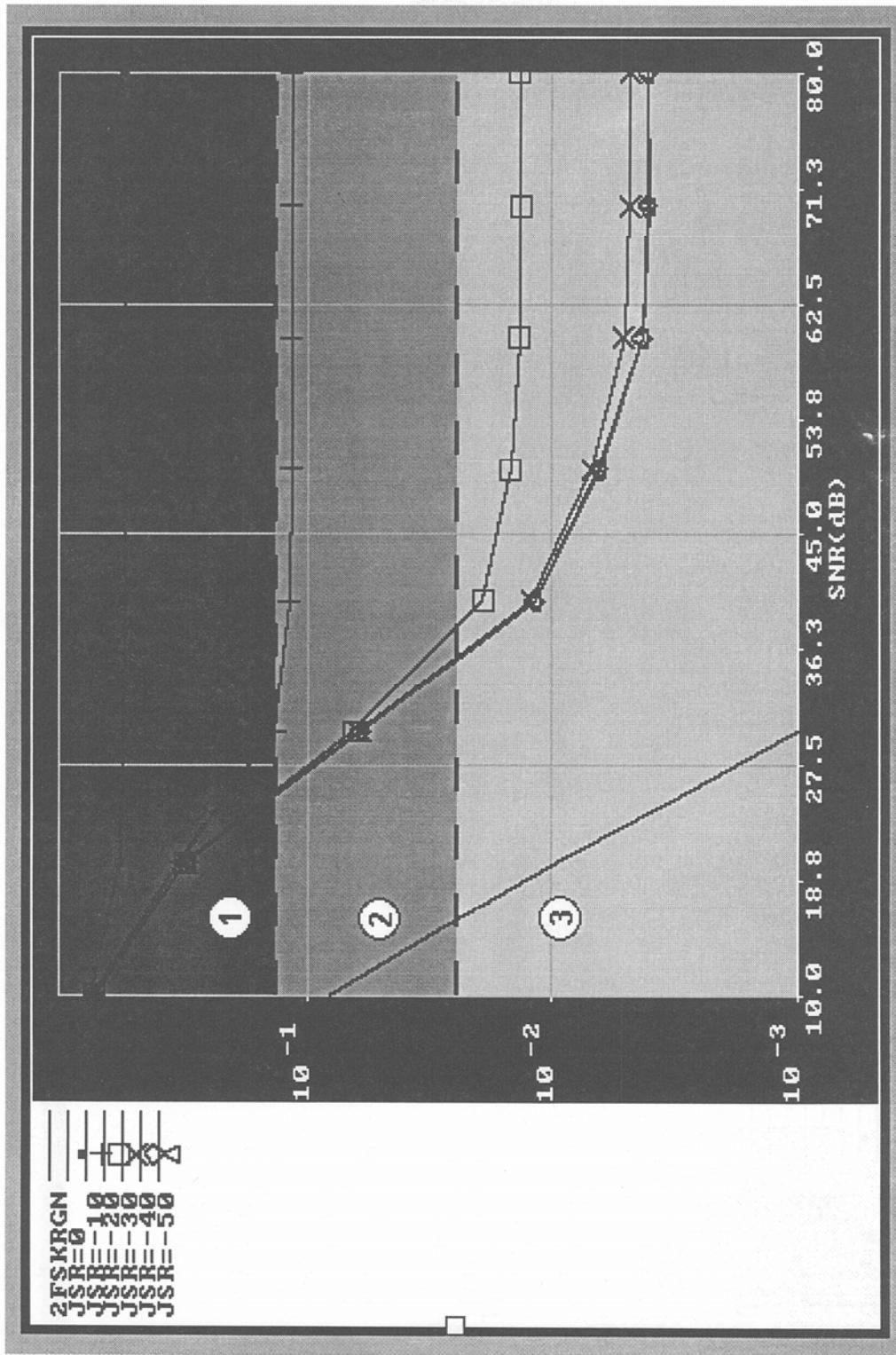


Figure A.1.4. PCM speech quality for 8-FSK. Circled numbers represent quality class and ordinate is in units of SER.

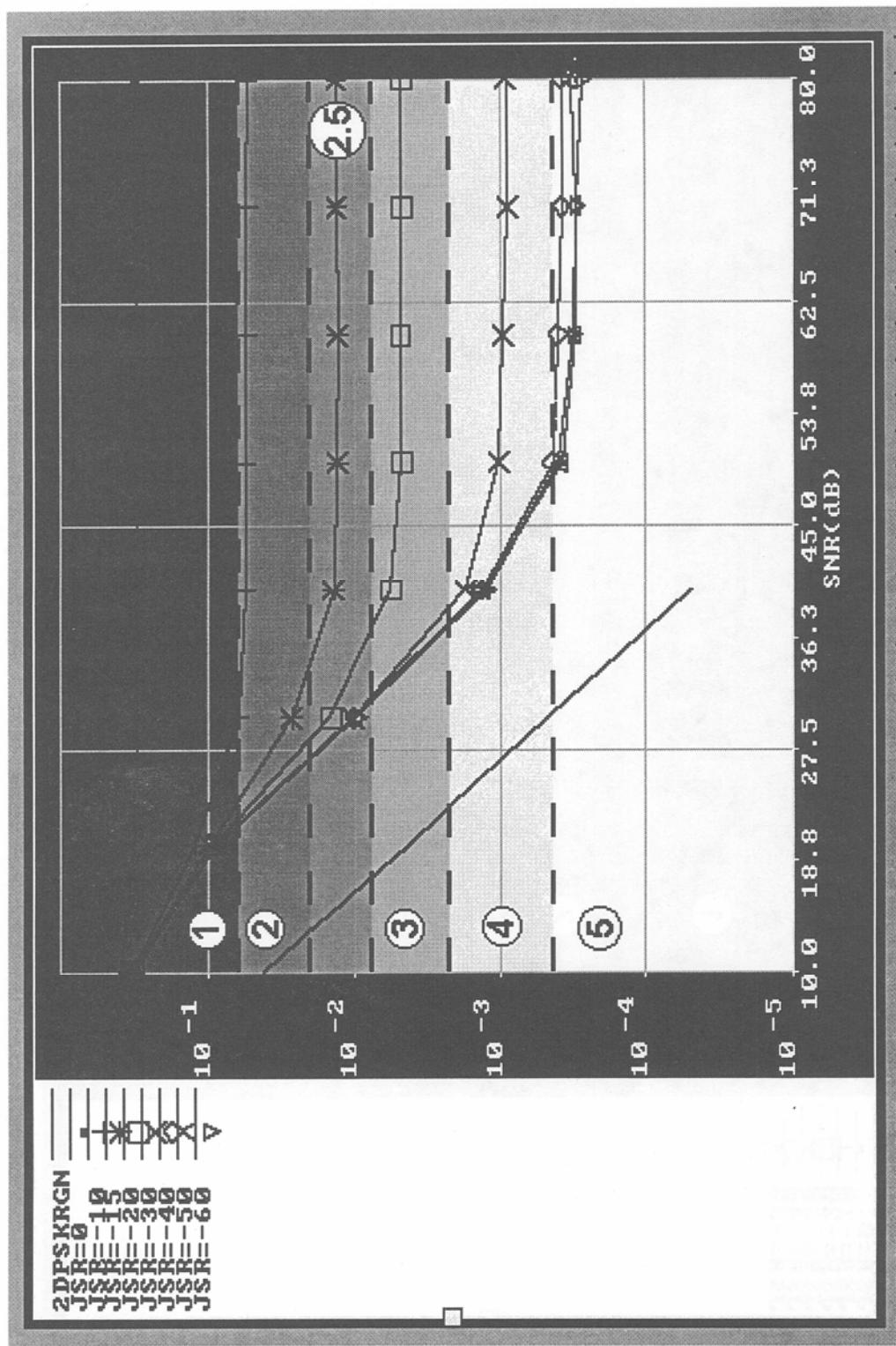


Figure A.1.5. PCM speech quality for 2-DPSK. Circled numbers represent quality class and ordinate is in units of SER.

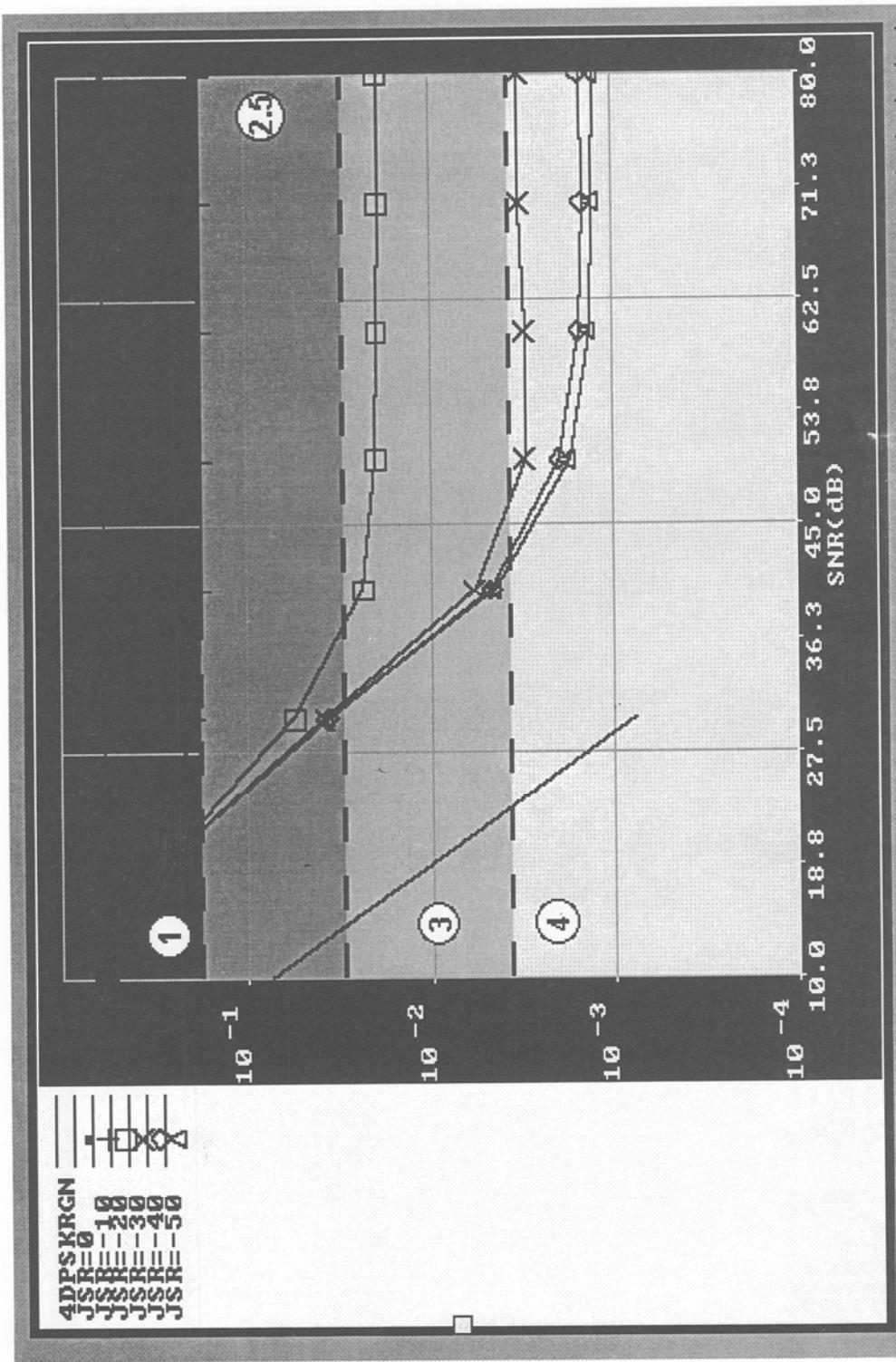


Figure A.1.6. PCM speech quality for 4-DPSK. Circled numbers represent quality class and ordinate is in units of SER.

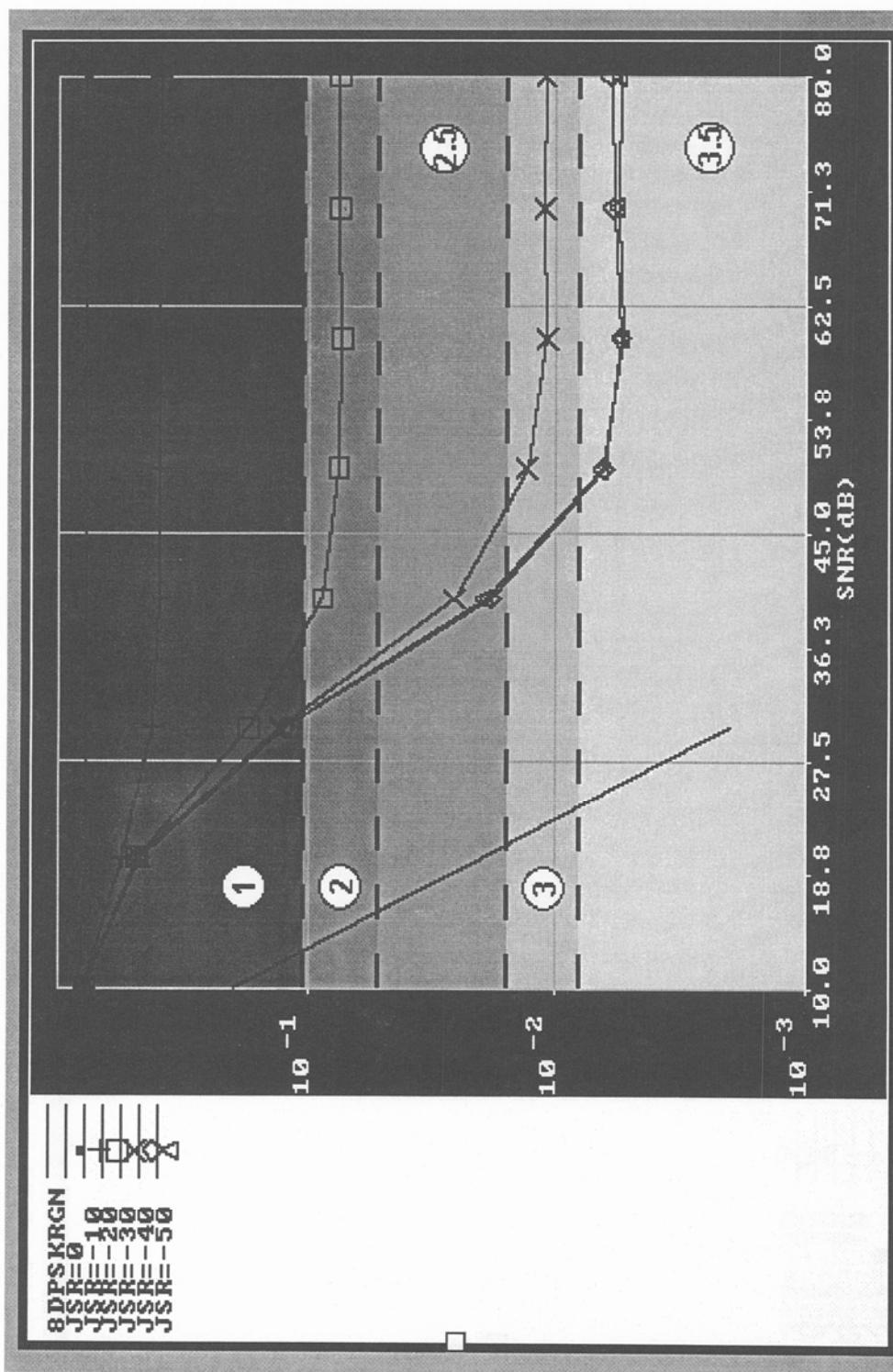


Figure A.1.7. PCM speech quality for 8-DPSK. Circled numbers represent quality class and ordinate is in units of SER.

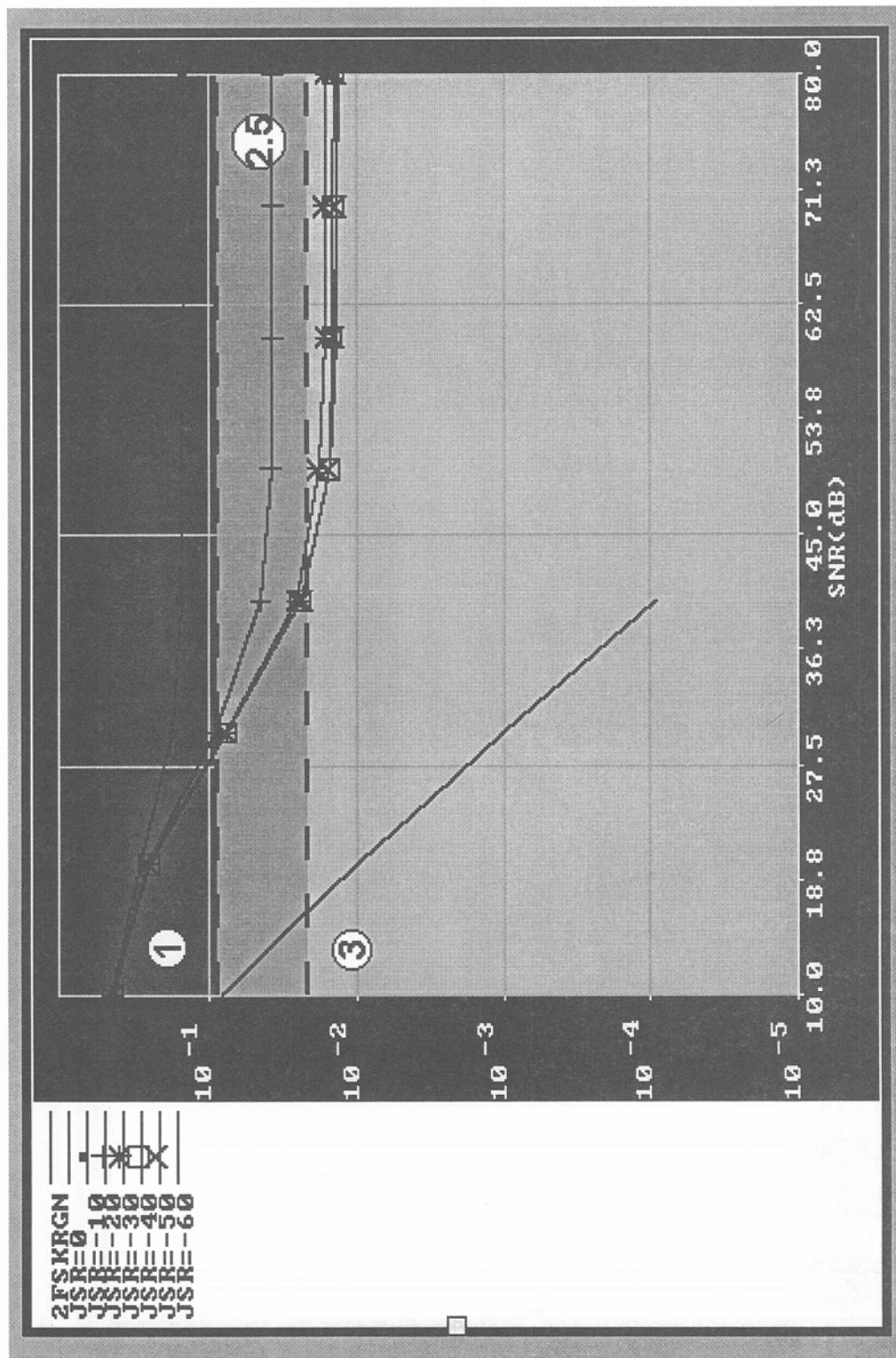


Figure A.1.8. PCM speech quality for 6-tone 2-FSK VFCT. Circled numbers represent quality class and ordinate is in units of SER.