

DAFTAR ISI

| | | |
|--------------------------|--|------|
| HALAMAN JUDUL | | |
| LEMBAR PENGESAHAN | | i |
| ABSTRAK | | ii |
| ABSTRACT | | iii |
| KATA PENGANTAR | | iv |
| DAFTAR ISI | | vi |
| DAFTAR GAMBAR | | viii |
| DAFTAR GRAFIK | | ix |
| DAFTAR ISTILAH | | x |
| | | |
| BAB I | PENDAHULUAN | |
| | 1.1 Latar Belakang | 1 |
| | 1.2 Maksud dan Tujuan | 1 |
| | 1.3 Rumusan Masalah | 2 |
| | 1.4 Batasan Masalah | 2 |
| | 1.5 Metode Penelitian | 2 |
| | 1.6 Sistematika Penulisan | 2 |
| | | |
| BAB II | TEORI DASAR ANTENA HELICAL | |
| | 2.1 Antena Helical | 4 |
| | 2.2 Karakteristik Antena Helical | 6 |
| | 2.2.1 Impedansi Antena | 6 |
| | 2.2.2 Voltage Standing Wave Ratio (VSWR) | 6 |
| | 2.2.3 Return Loss | 7 |
| | 2.2.4 Gain | 7 |
| | 2.2.5 Beamwidth | 8 |
| | 2.2.6 Pola Radiasi | 9 |
| | 2.2.7 Axial Ratio | 10 |
| | 2.2.8 Polarisasi | 10 |
| | 2.2.9 Direktivitas | 12 |
| | 2.3 Bentuk Geometri Antena Helik | 13 |

| | | |
|----------------|--|----|
| BAB III | PERANCANGAN DAN SIMULASI ANTENA HELICAL | |
| 3.1 | Prosedur Tahapan Pembuatan Program | 16 |
| 3.2 | Prosedur Perancangan | 17 |
| 3.2.1 | Perancangan Program Simulasi | 19 |
| 3.2.2 | Perancangan Form I | 20 |
| 3.2.3 | Perancangan Form II | 21 |
| 3.2.4 | Perancangan Form III | 21 |
| 3.2.5 | Perancangan Form IV | 23 |
| 3.3 | Hasil Perancangan Program Simulasi | 24 |
| BAB IV | ANALISA HASIL SIMULASI | |
| 4.1 | Analisa Hasil Simulasi Perbandingan Karakteristik Antena Helik | 27 |
| 4.1.1 | Perbandingan antara Impedansi (Z_{in}) terhadap Frekuensi (F) | 27 |
| 4.1.2 | Perbandingan antara Return Loss terhadap VSWR | 28 |
| 4.1.3 | Perbandingan antara Gain terhadap Diameter | 29 |
| 4.1.4 | Perbandingan antara Gain terhadap Jumlah Lilitan | 30 |
| 4.1.5 | Perbandingan antara E Total terhadap Besar Sudut | 31 |
| 4.1.6 | Perbandingan antara HPBW terhadap Frekuensi | 32 |
| 4.1.7 | Perbandingan antara BWFN terhadap Spasi Antar Lilitan | 33 |
| 4.1.8 | Perbandingan antara BWFN terhadap Circuference | 34 |
| BAB V | PENUTUP | |
| 5.1 | Kesimpulan | 35 |
| 5.2 | Saran | 36 |
| | DAFTAR PUSTAKA | 37 |
| | LAMPIRAN | |