

Text from email from FCC for STC

To: Scot Rogers, null
From: Frank Coperich
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FCC Application Processing Branch

Re: FCC ID OTR2200-540
Applicant: Southern Technologies Corporation
Correspondence Reference Number: 12162
731 Confirmation Number: EA96156
Date of Original E-Mail: 02/15/2000

- 1.) The Schematics referenced as Exhibit 5 were not received. Please (re) send them.
- 2.) No frequency stability was included on the FCC Form 731. Please supply this rated value.
- 3.) Please describe the modulation process.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 60 days of the original e-mail date may result in application dismissal pursuant to Section 2.917 (c) and forfeiture of the filing fee pursuant to section 1.1108.

DO NOT reply to this e-mail by using the Reply button. In order for your response to be processed expeditiously, you must upload your response via the Internet at www.fcc.gov, Electronic Filing, OET Equipment Authorization Electronic Filing. If the response is submitted through Add Attachments, in order to expedite processing, a message which informs the processing staff that a new exhibit has been submitted must also be submitted via Submit Correspondence. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.

February 15, 2000
RESPONSE to questions:

- 1.) The Schematics referenced as Exhibit 5 were not received. Please (re) send them.
The Schematic has been uploaded through the add attachments option from electronic filing.
- 2.) No frequency stability was included on the FCC Form 731. Please supply this rated value.
The 731 form should have N/A in the frequency stability field. Pursuant to CFR 47 Part 90 paragraph 213 (a) note 13, this device is not subject to frequency tolerance restrictions. It is recorded in the test report 32 parts per million.
- 3.) Please describe the modulation process.

Modulation Characteristics

The transmitted RF power by the SmartScan AEI hand-held reader is unmodulated, on-off-keyed (OOK) RF carrier. The effect of the OOK is an emission of pulses of the RF carrier. However, these pulses are not a digital encoding, and the pulses carry no information or data per se. This OOK is done simply to increase battery life and reduce any possible thermal relate issues.

An explanation of the pulsing scheme:

The pulsed RF power is controlled by the PIC microprocessor (U6), which drives (U4), a dual one-shot counter. In typical use of this product, an operator will give the unit the command to read a transponder by pushing the power on/read request switch. When it receives this command, the PIC microprocessor sends a pulse to the dual one-shot counter, which sends a pulse of DC voltage to the power control pin of the RF power amplifier (U10). This turns on the RF output for the length of time of the pulse. This is repeated approximately once each second for approximately 30 seconds. At this time the reader will turn itself off, a feature designed for enhancement of battery life.