Automatic Vehicle Identification

IDentity Flex
900 MHz Transceiver
Pre-Installation Questionnaire

IDentifying solutions

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Pre-Installation Questionnaire

The purpose of this document is to provide the customer with a means of selecting required installation equipment as well as a site planning reference guide. Filling out this questionnaire will ensure a prepared and timely installation of the Sirit IDentity Flex reader system. For any technical support questions please contact Sirit at 1-877-492-0101.

1.0. Cable Type Selection

1.1. If the reader is located **less** than 50 feet from the antenna use Belden 8240, RG-58/U 50-ohm solid conductor coaxial cable.

1.2. If the reader is located **more** than 50 feet from the antenna (to a maximum of 200 feet), use Belden 9913, RG-8/U 50-ohm solid conductor coaxial cable.

2.0. Connectors Types and Tools

2.1. For Belden 8240, RG58/U cable, each antenna requires (2) Amphenol 82-5375 and (2) AMP 226600-1 that SIRIT can provide as an option by quoting part # IDFLEX-CONN-RG58/U. Take note that the installer can supply these connectors. For **first time** installations, Sirit strongly recommends that the buyer purchase the pre-assembled cable with connectors, part # IDFLEX-CABLE-RG-58/U-60K.

2.2. For Belden 9913 cable, installers will need to convert from 9913 to a mini UHF connector at the reader end. SIRIT can provide cable converter kit as an option by quoting part # IDFLEX-CABLECON.

2.3. For Belden 9913 cable installers will need to provide connectors. Each antenna requires (4) Amphenol 82-202-1006 connectors or SIRIT can provide these as an option by quoting part # IDFLEX-CONN-9913.

2.4. Installers must use the proper crimping tool to install the above connectors. You can purchase this item locally (Amphenol CTL-5) or SIRIT can provide this as an option by quoting part # IDFLEX-CRIMP.

Special care must be taken when installing the above connectors. The details on how to install the above connectors properly can be found in SIRIT's Hardware Installation manual starting on pg. 28. ***Failure to use the right connectors/crimpers or procedure may result in decreased read range or no read at all****.*

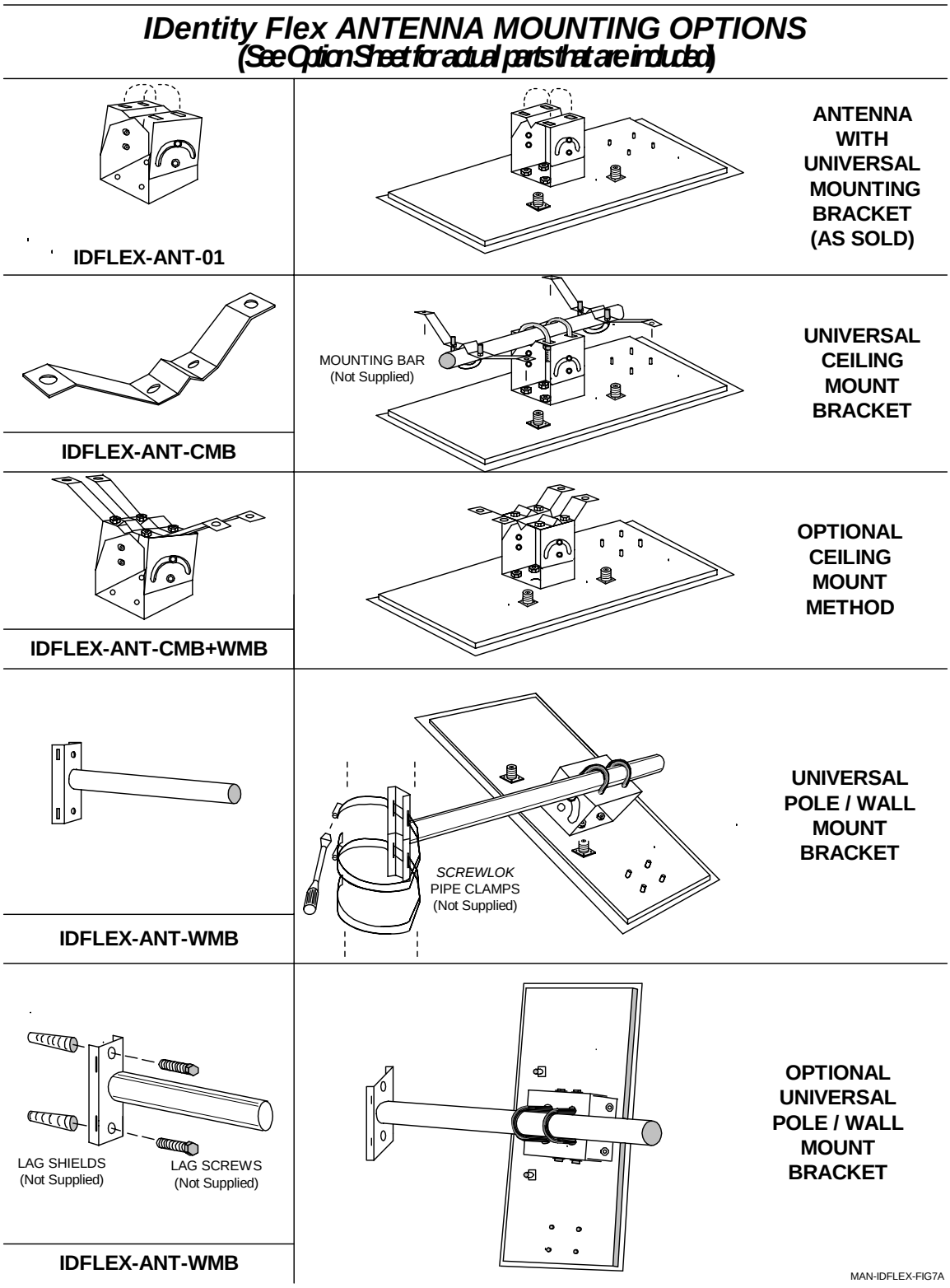
3.0. Mounting Brackets

3.1. SIRIT supplies one universal-mounting bracket per antenna, however other brackets may be used.

3.2. For pole or wall mount antennas, SIRIT has an optional Pole/wall mount bracket part #IDFLEX-ANT-WMB.

3.3. For ceiling mount antennas, SIRIT has an optional ceiling mount bracket part #IDFLEX-ANT-CMB.

Figure 3.1 – *IDentity Flex* Mounting Options



4.0. Transponders

Sirit offers three (3) types of vehicle mounted transponders:

4.1. IDentity Flex part # IDFLEX-TAG-4

4.2. Security Flex (S-Flex) part # IDFLEX-TAG-4WBOR. S-Flex transponders will be deactivated once they are removed from the windshield.

4.3. Three percent of vehicles may require license plate transponders as they may contain metal oxide in their windshields. External Mount (License Plate) part # IDFLEX-TAG-4LP

Customers should ensure that the IDentity Flex or IDentity S-Flex transponders read in the desired windshield location prior to affixing to the glass.

5.0. Relays

5.1. If relays are required, Sirit can provide them as an option. Please contact Sirit if necessary.

6.0. Readers and Lane Configuration

6.1. Please complete the table below for each Identity Flex Reader system.

Table 6.1 – Reader and Lane Configuration

Reader #	# Entrance Lanes	# Exit Lanes	# Reversible Lanes	# Antennas
1				
2				
3				
4				

7.0. Equipment Placement

7.1. If installing two or more readers or antennas please provide a diagram showing the planned placement and the distance separating each unit. Also indicate if there is conduit available for low voltage wiring between each of the readers. Use the attached island diagram as a template if applicable.

7.2. Show the cabling distance between each reader and the respective Antennas. Also check the respective box for the mounting location of each antenna.

Table 7.1 – Equipment Placement

	Cabling Distance between Reader and Antenna							
Reader #	**Ft./M**	**Ant. #1**	**Ft./M**	**Ant. #2**	**Ft./M**	**Ant. #3**	**Ft./M**	**Ant. #4**
1		☐ Ceiling ☐ Pole ☐ Wall		☐ Ceiling ☐ Pole ☐ Wall		☐ Ceiling ☐ Pole ☐ Wall		☐ Ceiling ☐ Pole ☐ Wall
2		☐ Ceiling ☐ Pole ☐ Wall		☐ Ceiling ☐ Pole ☐ Wall		☐ Ceiling ☐ Pole ☐ Wall		☐ Ceiling ☐ Pole ☐ Wall
3		☐ Ceiling ☐ Pole ☐ Wall		☐ Ceiling ☐ Pole ☐ Wall		☐ Ceiling ☐ Pole ☐ Wall		☐ Ceiling ☐ Pole ☐ Wall
4		☐ Ceiling ☐ Pole ☐ Wall		☐ Ceiling ☐ Pole ☐ Wall		☐ Ceiling ☐ Pole ☐ Wall		☐ Ceiling ☐ Pole ☐ Wall

8.0. Gates

8.1. List manufacturer and models of all gates.

Table 8.1 – Gate Manufacturer and Model

Manufacturer Name	Model	Memory Buffer Circuitry (Y/N)

8.2. Will there be traffic backups during peak periods? **(Yes / No)** _____

9.0. Access Control System

9.1. Will the Sirit reader interface with a third party access control system (host)? (**Yes/No**) _____

9.2. Whose access control system will you be using (e.g. McGann, Federal APD, WPS, Sentex)? _____

9.3. How will the IDentity Flex readers communicate with the access control system (e.g., RS-485, Wiegand)? _____

9.4. Will the IDentity Flex reader be directly activating a gate (i.e., relay)? (**Yes/No**) _____

9.5. Will the IDentity Flex reader be directly activating a light? (**Yes/No**) _____

10.0. Lane Configuration

10.1. What is the desired read range (i.e., how far away from the antenna do you want to read the transponder?)?_____

10.2. In your sequence of lane logic, when do you want the Tag to be read?

a) Upon entering the read zone _____
b) After triggering a ground loop _____

10.3. When do you want the Tag read to be sent from the reader to the host/lane controller? _____

(example: after the vehicle is over the presence loop; when the gate is down or moving down)

10.4. Are there any conditions (e.g. gate up) where your system will not accept an AVI read? _____

11.0. Miscellaneous

Installers will need a laptop computer (with DB-9 serial cable) to set the reader configurations/antenna read distances and for routine maintenance tasks such as tag list updates. If a laptop is not available, Sirit can preset the reader parameters prior to shipping. The parameters will be set based on the site description details provided by the installer.

11.1. Do you have a laptop at the site location to set up and configure the IDentity Flex firmware? (**Yes/No**) _____

11.2. Will the system interface to overhead garage door openers? (**Yes/No**) _____

11.3. Are there any new or existing in ground detector loops? (**Yes/No**) _____

11.4. Will the antennas be mounted under a metal canopy? (**Yes/No**) _____

11.5. Will users remove the transponders from their cars and carry them, after parking? (Not applicable to SIRIT's Break on Removal "S" Flex transponder) (**Yes/No**) _____

11.6. Are you aware of any radio frequency transmission sources operating in the 902 MHz to 928 MHz range near or at your site? (**Yes/No**) _____

11.7. Do you have a digital camera and an e-mail address to send location pictures if if required? (**Yes/No**) _____

12.0. Site Examples

Figure 12.1 – Single lane set ups consisting of an entry and exit antenna

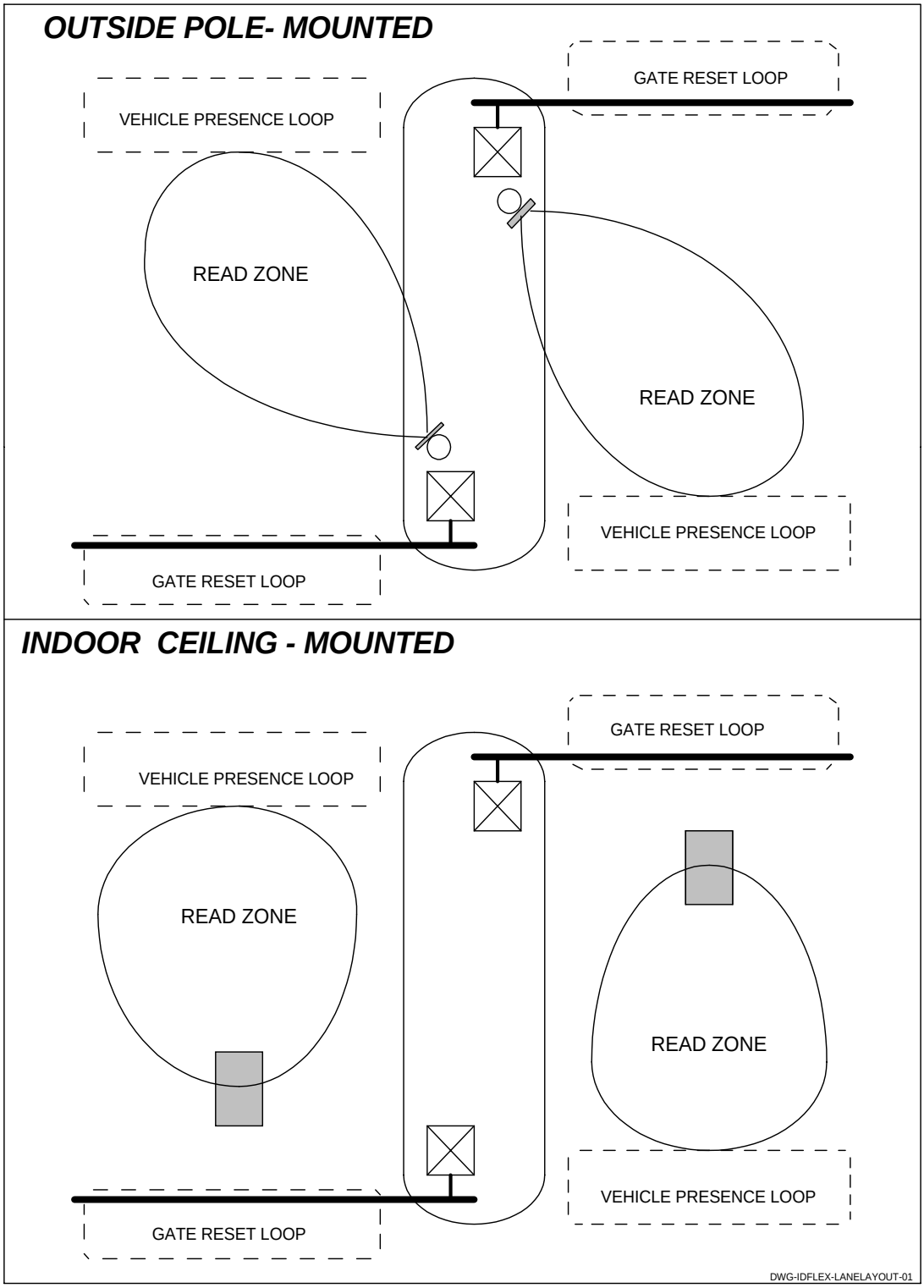


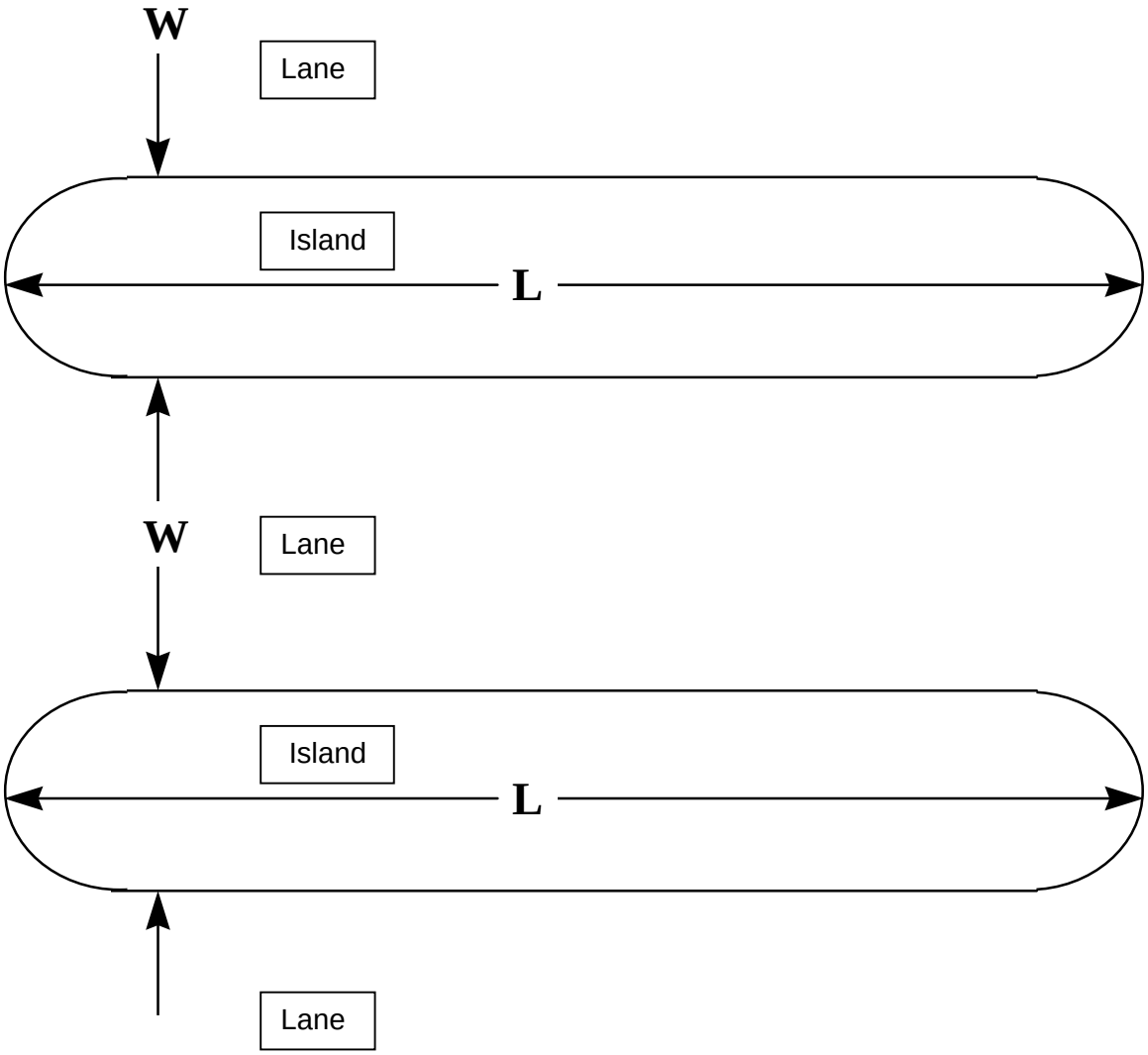
Figure 12.2 – Installation Examples

13.0. Island Design Sketch

Please fax the attached island diagram with the following to (905) 940-4405 when completed:

- Direction of Travel
- Position of Card Readers
- Position of Gates, Ticket Spitters and Booths
- Dimensions of Island
- Position and Size of any Metal Signs
- Position and Sizes of in-Ground Detector Loops
- Position of Bollards
- Island Location Name
- Position and Orientation of each of each Antenna relative to others

Figure 13.1 – Island Design Sketch



14.0. Site License – Customer Disclaimer6/11/02

Customer (end user) acknowledges that a site license is required for each IDentity Flex system location. It is the customer's responsibility to file for this site license and submit the appropriate filing payment. SIRIT will assist with the completion of the forms. United States filings require completion and submission of form numbers 159, 601 Main, 601 D, and 601 H to the FCC (Federal Communications Commission). Canadian filings require completion and submission of form number IC2365BB and IC2430BB to Industry Canada.