



rfPIC™
Development Kit 1
Quick Start Guide

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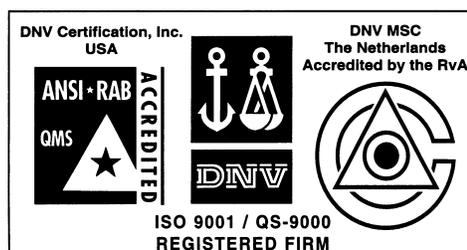
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Chapter 1. Getting Started

1.1 INTRODUCTION

The rfPIC Development Kit 1 is a demonstration and development kit for the rfPIC12F675K and rfPIC12F675F PICmicro® microcontrollers with UHF ASK/FSK transmitters and rRXD0420 UHF ASK/FSK/FM receiver. The transmitter and receiver modules are designed to plug into the PICKit™ 1 FLASH Starter Kit expansion header J3 for a low-cost development system.

1.2 HIGHLIGHTS

This document discusses the following:

- Getting Started with the rfPIC Development Kit 1
 - Preparing the Receiver Module for Operation
 - Preparing the Transmitter Module for Operation
 - Demonstration Operation
- Demonstration Programs and HEX Files

1.3 GETTING STARTED WITH THE rfPIC DEVELOPMENT KIT 1

The transmitter modules come pre-programmed with a transmitter demonstration. The enclosed PIC16F676 is programmed with a receiver demonstration program. Together they demonstrate an on-off command and control application.

The PICKit 1 FLASH Starter Kit serves as a low-cost development and demonstration platform for the transmitter and receiver modules.

To see your rfPIC Development Kit 1 in action, perform the following steps:

1.3.1 Preparing the Receiver Module for Operation

STEP 1:

Familiarize yourself with the PICKit 1 FLASH Starter Kit operation by reading the PICKit™ 1 FLASH Starter Kit User's Guide (DS40051) and performing some of the tutorials. Familiarity with the PICKit Starter Kit will be assumed throughout this user's guide.

STEP 2:

Remove power from the PICKit Starter Kit by disconnecting the USB cable.

STEP 3:

Remove the PIC12F675 from the PICKit Starter Kit evaluation socket.

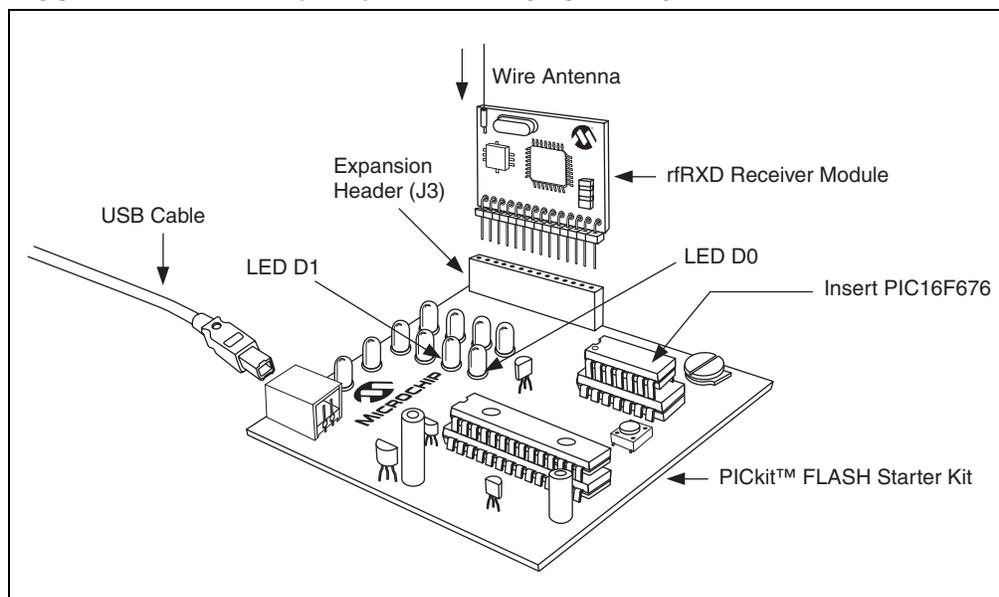
STEP 4:

Insert the PIC16F676 into the PICKit Starter Kit evaluation socket. See Figure 1-1.

STEP 5:

Insert a receiver module (315 or 433.92 MHz) into the PICKit Starter Kit expansion header J3. Make certain that the receiver module is oriented correctly. See Figure 1-1.

FIGURE 1-1: rfPIC RECEIVER DEMONSTRATION



STEP 6:

Insert the wire antenna into the antenna connector on the receiver module. See Figure 1-1. The wire antenna length is determined by the receive frequency. For the corresponding frequency, insert the following wire antenna:

Frequency	Antenna Length
315 MHz	9-3/8"
433.92 MHz	6-3/4"

STEP 7:

Power-on the PICkit Starter Kit by connecting the USB cable to a personal computer or externally powered USB hub.

Note: There is no interaction between the receiver demonstration program in the PIC16F676 and the personal computer.

The receiver module is ready for operation.

1.3.2 Preparing the Transmitter Module for Operation

STEP 1:

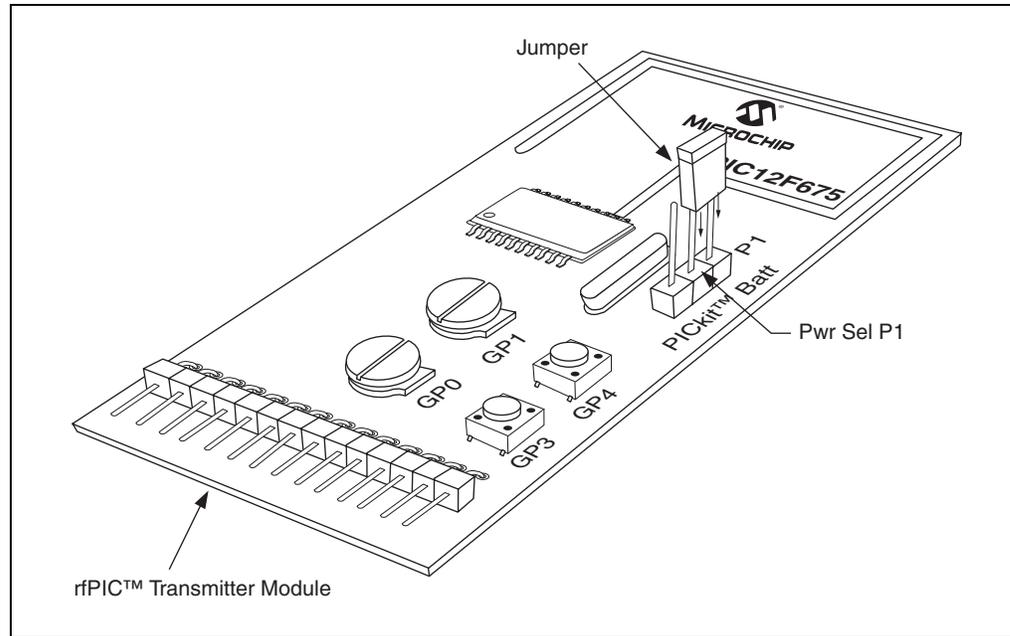
Select the transmitter module that matches the receive frequency of the receiver module installed in the PICkit Starter Kit.

STEP 2:

Power on the transmitter module by positioning the shunt jumper to the batt position on P1 (between center pin and batt pin). See Figure 1-2.

The transmitter module is ready for operation.

FIGURE 1-2: rfPIC TRANSMITTER DEMONSTRATION



1.3.3 Demonstration Operation

The demonstration program is a simple on-off command and control application. Pressing push button GP3 (SW2) on the transmitter module lights LED D0 on the PICkit Starter Kit. Pressing push button GP4 (SW1) lights LED D1.

1.4 DEMONSTRATION PROGRAMS AND HEX FILES

Additional demonstration programs are provided on the rfPIC Development Kit 1 CD-ROM. Chapter 2 in the rfPIC™ Development Kit 1 User's Guide (DS70093) provides an explanation of each program. HEX files and program source code are provided. The HEX files can be programmed into the rfPIC transmitter and receiver modules using the PICkit 1 FLASH Starter kit. The source code can be modified and compiled using the MPLAB® Integrated Development Environment (IDE) software and the resulting HEX files programmed in the same manner.

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