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Implementing a Bootloader for the PIC16F87X

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INTRODUCTION

The PIC16F87X family of microcontrollers has the ability to write to their own program memory. This feature allows a small bootloader program to receive and write new firmware into memory. This application note explains how this can be implemented and discusses the features that may be desirable.

In its most simple form, the bootloader starts the user code running, unless it finds that new firmware should be downloaded. If there is new firmware to be downloaded, it gets the data and writes it into program memory. There are many variations and additional features that can be added to improve reliability and simplify the use of the bootloader, some of which are discussed in this application note.

The general operation of a bootloader is discussed in the OPERATION section. Appendix A contains assembly code for a bootloader developed for the PIC16F877 and key aspects of this bootloader are described in the IMPLEMENTATION section.

For the purpose of this application note, the term "boot code" refers to the bootloader code that remains permanently in the microcontroller and the term "user code" refers to the user's firmware written into FLASH memory by the boot code.

FEATURES

The more common features a bootloader may have are listed below:

- Code at the Reset location.
- Code elsewhere in a small area of memory.
- Checks to see if the user wants new user code to be loaded.
- Starts execution of the user code if no new user code is to be loaded.
- Receives new user code via a communication channel if code is to be loaded.
- · Programs the new user code into memory.

OPERATION

The boot code begins by checking to see if there is new user code to be downloaded. If not, it starts running the existing user code. If there is new user code to be downloaded, the boot code receives and writes the data into program memory. There are many ways that this can be done, as well as many ways to ensure reliability and ease of use.

Integrating User Code and Boot Code

The boot code almost always uses the Reset location and some additional program memory. It is a simple piece of code that does not need to use interrupts; therefore, the user code can use the normal interrupt vector at 0×0004 . The boot code must avoid using the interrupt vector, so it should have a program branch in the address range 0×0000 to 0×0003 .

The boot code must be programmed into memory using conventional programming techniques, and the configuration bits must be programmed at this time. The boot code is unable to access the configuration bits, since they are not mapped into the program memory space. Setting the configuration bits is discussed in the next section.

In order for the boot code to begin executing the user code, it must know where the code starts. Since the boot code starts at the Reset vector, the user code cannot start at this location. There are two methods for placing the starting point of the user code.

One method is to use an ORG directive to force the user code to start at a known location, other than the Reset vector. To start executing the user code, the boot code must branch to this fixed location, and the user code must always use this same location as its start address.

An alternative method is to start the user code at the normal Reset vector and require that the user code has a goto instruction in the first four instructions to avoid the interrupt vector. These four instructions can then be relocated by the boot code and programmed into the area of program memory used by the boot code. This simplifies the development of code for use with the bootloader, since the user code will run when programmed directly into the chip without the boot code present. The boot code must take care of paging and banking so the normal Reset conditions apply before executing the relocated code.

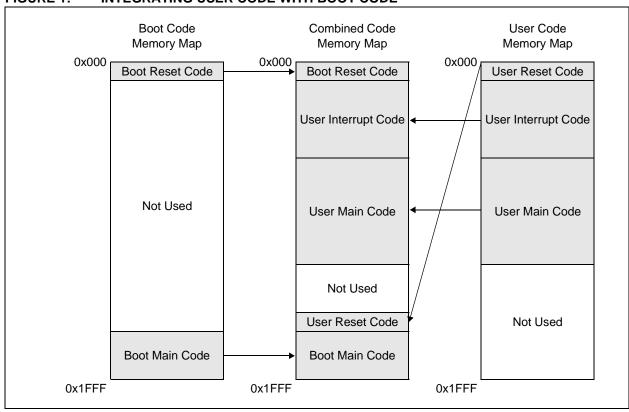


FIGURE 1: INTEGRATING USER CODE WITH BOOT CODE

Configuration Bits

The configuration bits cannot be changed by the boot code since they are not mapped into the program memory space. This means that the following configuration options must be set at the time that the boot code is programmed into the device and cannot be changed:

CPx Program Memory Code Protection Enable

DEBUG In-Circuit Debugger Mode Enable

WRT Program Memory Write Enable

CPD Data EEPROM Code Protection Enable

LVP Low Voltage In-Circuit Programming Enable

BODEN Brown-out Reset Enable

PWRTE Power-up Timer Enable

- WDTE Watchdog Timer Enable
- FOSCx Oscillator Selection

Most of these configuration options are hardware or design-dependent, and being unable to change them when the user code changes is of no consequence.

The various PIC16F87X devices have different code protection implementations. Please consult the appropriate data sheet for details.

Some devices (such as the PIC16F877), can code protect part of the program memory and prevent internal writes to this protected section of memory. This can be used to protect the boot code from being overwritten, but also prevents the user code from being code protected, however.

On some devices, code protecting all the program memory still allows internal program memory write cycles. This provides security against the user code being read out of the chip, but does not allow the boot code to be protected from being overwritten.

Data EEPROM Code Protection Enable would normally not need to be set, unless data is programmed into the data EEPROM when the boot code is originally programmed and this data needs to be protected from being overwritten by the user code.

Program Memory Write Enable must be enabled for the boot code to work, since it writes to program memory. Low Voltage In-Circuit Serial Programming (ICSPTM) enable only needs to be set if the user wishes to program the PICmicro MCU in-circuit, using logic level signals on the RB3, RB6 and RB7 pins. Since the purpose of the boot code is to program user code into the PICmicro MCU, in most cases, it would be redundant to have facilities for low voltage ICSP.

If the Watchdog Timer is enabled, then the boot code must be written to support the Watchdog Timer and all user code will have to support the Watchdog Timer.

Determining Whether to Load New Code or to Execute User Code

After a Reset, the boot code must determine whether to download new user code. If no download is required, the bootcode must start execution of existing user code, if available.

There are many ways to indicate whether or not new user code should be downloaded. For example, by testing a jumper or switch on a port pin, polling the serial port for a particular character sequence, or reading an address on the l^2C^{TM} bus. The particular method chosen depends on the way that user code is transferred into the microcontroller. For example, if the new user code is stored on an l^2C EEPROM that is placed in a socket on the board, then an address in the EEPROM could be read to determine whether a new EEPROM is present.

If an error occurred while downloading new user code, or the bootloader is being used for the first time, there might not be valid user code programmed into the microcontroller. The boot code should not allow faulty user code to start executing, because unpredictable results could occur.

Receiving New User Code to Load into Program Memory

There are many ways that the microcontroller can receive the new firmware to be written into program memory. A few examples are from a PC over a serial port, from a serial EEPROM over an I^2C or SPITM bus, or from another microcontroller through the parallel slave port.

The boot code must be able to control the reception of data, since it cannot process any data sent to it while it is writing to its own program memory. In the case of data being received via RS-232, there must be some form of flow control to avoid data loss.

The data received by the boot code will usually contain more than just program memory data. It will normally contain the address to which the data is to be written and perhaps a checksum to detect errors. The boot code must decode, verify and store the data, before writing it into program memory. The available RAM (GPR registers) of the device limits the amount of data that can be received before writing it to program memory.

Programming the FLASH Program Memory

The PIC16F87X devices have special function registers that are used to write data to program memory. There is a specific sequence of writes to these registers that must be followed to reduce the chances of an unintended program memory write cycle occurring. Because code cannot be executed from the FLASH program memory while it is being written, program execution halts for the duration of the write cycle. Program memory is written one word at a time.

Error Handling

There are several things that can go wrong during execution of the boot code or user code. The bootloader should handle the following error conditions:

- No valid user code written into the chip.
- Error in incoming data.
- Received user code does not have any code at its Reset vector.
- Received user code overlaps boot code.
- User code causes execution into the boot code area.

If the bootloader is being used for the first time, or if the user code is partially programmed because of a previous error, there might not be valid user code programmed into the microcontroller. The boot code should not allow potentially faulty user code to start executing.

The transfer of data can be interrupted, which will cause the boot code to stop receiving data. There are several ways to handle this depending on how the data is being received. For example, the boot code may be able to time-out and request the data to be sent again. The simplest method is to wait, trying to receive more data with no time-out, until the user intervenes and resets the device. Since the boot code needs to leave the most possible program memory space for the user code and also be reliable, the smallest, simplest implementation is often the best.

Incoming data may be corrupted by noise or some other temporary interruption, and this should be detected, otherwise, incorrect data could be programmed. A checksum or other error detection method can be used.

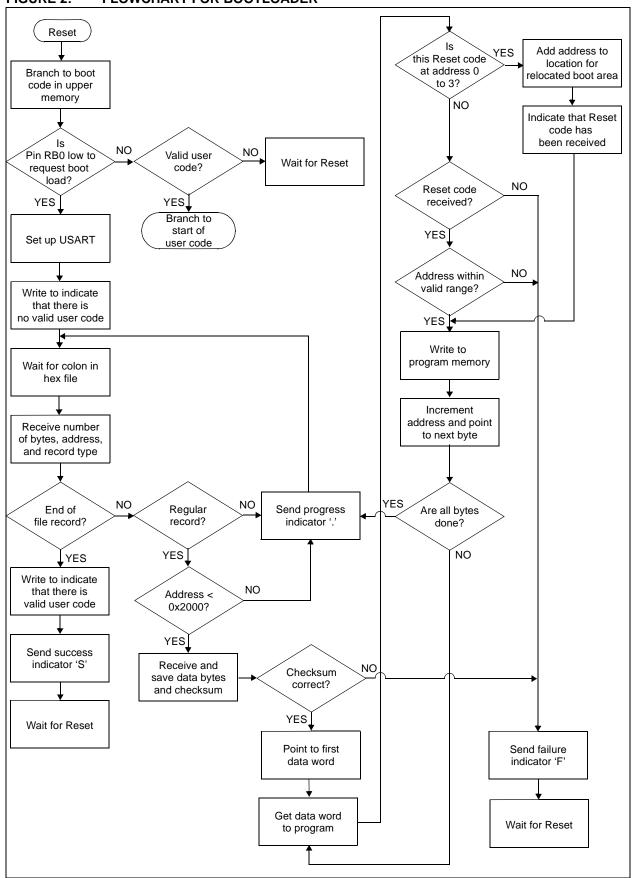
Incorrect use of flow control can result in data being sent to the PICmicro MCU while it is not ready to receive data. This can cause overrun errors that should be handled by the boot code. Once an overrun has occurred, the data is lost and this is essentially the same as a data transfer interruption, discussed above.

In some cases, data could be sent to the microcontroller before the boot code is running, causing part of the data to be lost. If this type of error is possible, then it should be detected. This error may manifest itself as user code that does not seem to have any code at the Reset location and can be detected by checking the addresses being programmed. An alternative is to generate a checksum on all the code that is written into program memory and transmit this to the user for verification, after programming has been completed. The code developer should take care that the user code does not use the same program memory space that the boot code uses. The exception is the user code at the Reset location that can be relocated, as explained earlier. If the user code does try to use program memory that contains boot code, the boot code should detect the conflicting address and not overwrite itself. In some devices, part of the program memory can be code protected to prevent internal writes to the part of the memory that contains the main boot code. Note that this does not apply to all PIC16F87X devices.

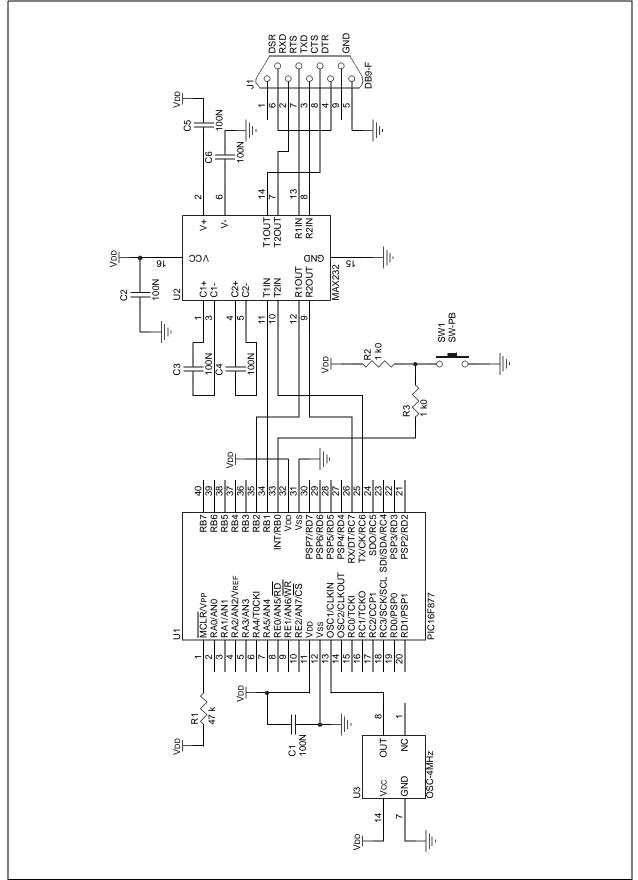
Faulty user code, or a brown-out condition that corrupts the program counter, can cause execution to jump to an unprogrammed memory location and possibly run into the start of the boot code. If the user code at the Reset location is being relocated, as explained earlier, then execution can enter the boot code area if a program branch does not occur in these four relocated instructions. The boot code should trap the program execution to avoid these errors from causing any unintended operation.

When an error is detected, it is useful to indicate this in some way. This can be as simple as turning on an LED, or sending a byte out the serial port. If the system includes a display and the display drivers are incorporated into the boot code, then more sophisticated error messages can be used.









IMPLEMENTATION

How this Bootloader Works

The boot code in Appendix A implements a bootloader in a PIC16F877 device. It uses the USART to receive data with hardware handshaking, tests a pin to decide if new user code should be received and includes many of the features discussed in this application note.

Integrating User Code and Boot Code

The code at the Reset location (ResetVector) writes to PCLATH. To set the page bits, it then jumps to the rest of the boot code in upper memory. The main code is in the upper 224 bytes of memory starting at address 0x1F20 (StartOfBoot). The first instructions at this location trap accidental entry into the boot code. The main bootloader routine starts at the address labeled Main.

The boot code requires that the user code includes a goto instruction in the first four locations after the Reset vector and relocates these four instructions into the boot code section (StartUserCode). This simplifies the development of code for use with the bootloader, since the same user code will also run when programmed directly into the chip, without the boot code present. The boot code changes to bank 0 and clears PCLATH before executing the relocated code, so that the normal Reset conditions apply. If a program branch does not occur in the four relocated instructions, then program execution is trapped in an endless loop to avoid any unintended operation.

The boot code must be programmed into the PIC16F877 using conventional programming techniques and the configuration bits are programmed at the same time. The configuration bits are defined with a _____CONFIG directive and cannot be accessed by the boot code, because they are not mapped into the program memory space. The boot code does not use a Watchdog Timer.

Determining Whether to Load new Code or to Execute User Code

The boot code tests port pin RB0 to determine whether new user code should be downloaded. If a download is required, then the boot code branches to the Loader routine that receives the data and writes it into program memory.

If pin RB0 does not indicate that new user code should be loaded, then a program memory location (labeled CodeStatus) is read with routine FlashRead to determine whether there is valid user code in the device. If there is valid user code, the boot code transfers execution to the user code by branching to location StartUserCode. Otherwise, execution is trapped in an endless loop to avoid this error from causing any unintended operation.

Receiving New User Code to Load into Program Memory

The boot code receives the new firmware as a standard Intel[®] hex file (INHX8M format), using the USART in Asynchronous Receiver mode (hex format defined in Appendix B). It is assumed that a PC will be used to send this file via an RS-232 cable, connected to a COM port. Hardware handshaking allows the boot code to stop the PC from transmitting data while FLASH program memory is being written. Since the PICmicro device halts program execution while the FLASH write occurs, it cannot read data from the USART during this time.

Hardware handshaking (described in Appendix C) is implemented using port pin RB1 as the RTS output and RB2 as the CTS input. The USART is set to 8-bit Asynchronous mode at 9600 baud in the SerialSetup routine. The SerialReceive routine enables transmission with the RTS output and waits until a data byte has been received by the USART, before returning with the data. The SerialTransmit routine checks the CTS input until a transmission is allowed and then sends a byte out the USART. This is used for transmitting progress indication data back to the PC.

The boot code receives the hex file, one line at a time and stops transmission after receiving each line, while received data is programmed into program memory.

Decoding the Hex File

The boot code remains in a loop, waiting until a colon is received. This is the first character of a line of the hex file. The following four pairs of characters are received and converted into bytes, by calling the GetHexByte routine. The number of bytes (divided by two to get the number of words) and the address (divided by two to get a word address) are saved, and the record type is checked for a data record, or end of file record.

If the record type shows that the line contains program memory data, then this data is received, two pairs of characters at a time (using the GetHexByte routine), and is stored in an array. The checksum at the end of the line is received and checked, to verify that there were not any errors in the line.

Once the hex file line has been received, hardware handshaking is used to stop further transmission, while the data is written into the program memory. The <CR> and <LF> characters that are sent at the end of the line are ignored. This gives the handshaking time to take effect by ignoring the byte being transmitted, when the handshaking signal is asserted. Once the data from the line has been programmed, the following lines are received and programmed in the same way, until the line indicating the end of the file has been received. A success indication 'S' is then transmitted out the USART (by the FileEnd routine) and the boot code waits for a Reset.

Programming the FLASH Program Memory

Data is written to the FLASH program memory using special function registers. The address is written to the EEADR and EEADRH registers and the first two bytes of data are written to EEDATA and EEDATH. The FlashWrite routine is then executed, which writes the data into program memory. The address is then incremented and the next two data bytes are written. This is repeated until all the data from the line of the hex file has been programmed into the FLASH program memory.

Error Handling

There are several things that can go wrong during execution of the boot code or user code, and a number of these error conditions are handled by the boot code. If an error occurs, the boot code traps it by executing an infinite loop, until the user intervenes and resets the device. If an error is detected in the incoming data, then a failure indication 'F' is transmitted. This does not occur in the case of an overflow error, or if the data transmission is halted.

If the bootloader is being used for the first time, or if the user code is partially programmed because of a previous error, there might not be valid user code programmed into the microcontroller. The boot code handles this by writing a status word (0x3fff) at a location labeled CodeStatus, before programming the FLASH device, and then writing a different status word (0x0000) to this same location, when programming of the user code has been completed. The boot code tests this location and only starts execution of the user code, if it sees that the user code was successfully programmed. When the boot code is originally programmed into the PICmicro MCU, the status word indicates that there is not valid user code in the device.

The transfer of data can be interrupted. In this case, the boot code waits, trying to receive more data with no time-out, until the user intervenes and resets the device. Noise, or a temporary interruption, may corrupt incoming data. The Intel hex file includes a checksum on each line and the boot code checks the validity of each line by verifying the checksum.

Incorrect use of flow control can result in data being sent to the PIC16F877, while it is not ready to receive data. This can cause an overrun error in the USART. Once an overrun has occurred, the USART will not move any new data into the receive FIFO and the boot code will be stuck in a loop waiting for more data. This effectively traps the error until the user intervenes by resetting the device.

If the user starts transmitting a hex file before the boot code is running, the boot code may miss the first lines of the file. Since all the lines of a hex file have the same format, it is not normally possible to determine whether the line being received is the first line of the hex file. However, since MPASM generates hex files with addresses in ascending order, the first valid line of the hex file should contain the code for the Reset vector which is checked by the boot code.

The user code may try to use program memory locations that contain boot code. This is detected by checking the address being programmed and detecting conflicting addresses. The boot code will not overwrite itself and is not code protected.

Faulty user code, or noise that corrupts the program counter, can cause execution to jump to an unprogrammed memory location and possibly run into the start of the boot code. The first instructions in the boot code are an infinite loop that traps execution into the boot code area.

Because the first four instructions in program memory are relocated in the boot code implementation, there must be a program branch within these four instructions. If there is no program branch, then execution is trapped by the boot code.

Using the Bootloader

The procedure for using the bootloader is as follows:

- On the PC, set up the serial port baud rate and flow control (hardware handshaking).
- Connect the serial port of the PIC16F87X device to the serial port of the PC.
- Press the switch to pull pin RB0 low.
- Power up the board to start the boot code running.
- The switch on RB0 can be released if desired.
- From the PC, send the hex file to the serial port.
- A period '.' will be received from the serial port for each line of the hex file that is sent.
- An 'S' or 'F' will be received to indicate success or failure.
- The user must handle a failure by resetting the board and starting over.
- Release the switch to set pin RB0 high.
- Power-down the board and power it up to start the user code running.

On the PC, there are several ways to set up the serial port and to transfer data. This also differs between operating systems.

A terminal program allows the user to set up and send data to a serial port. In most terminal programs, an ASCII or text file can be sent and this option should be used to send the hex file. A terminal program will also show data received on the serial port and this allows the user to see the progress '.' indicators and the success 'S' or failure 'F' indicators. There are many terminal programs available, some of which are available free on the Internet. This boot code was tested using Tera Term Pro, Version 2.3. The user should be aware that some popular terminal programs contain bugs. A serial port can be set up in a DOS window, using the MODE command and a file can be copied to a serial port, using the COPY command. When using Windows[®] 95/98, the MODE command does not allow the handshaking signals to be configured. This makes it difficult to use the COM port in DOS. When using Windows NT[®] or Windows 2000[®], the following commands can be used to send a hex file named filename.hex to serial port COM1:

MODE COM1: BAUD=9600 PARITY=N DATA=8 STOP=1 to=off xon=off odsr=off octs=on dtr=off rts=on idsr=off

COPY filename.hex COM1:

Resources Used

The boot code coexists with the user code on the PIC16F877 and many of the resources used by the boot code can also be used by the user code. The boot code uses the resources listed in Table 1.

TABLE 1: RESOURCES USED BY THE BOOT CODE

Resource	Amount
Program memory	224 words
Data memory	72 bytes
I/O pins	5 pins
Peripherals	USART

The program memory used by the boot code cannot be used for user code, although it is possible to call some of the subroutines implemented in the boot code to save space. The user code can use all the data memory.

The USART can be used by the user code with the two I/O pins for the USART and the I/O pins used for handshaking. The I/O pin used to indicate that the boot code should load new user code, is connected to a switch or jumper. This can be isolated with a resistor and used as an output, so that it is possible to use all the I/O pins used by the bootloader.

In summary, all resources used by the boot code, except program memory, can also be used by the user code.

CONCLUSION

Using a bootloader is an efficient way to allow firmware upgrades in the field. Less than 3% of the total program memory is used by the boot code and the entire program memory available on a PIC16F877 can be programmed in less than one minute at 19,200 baud.

The cost of fixing code bugs can be reduced with a bootloader. Products can be upgraded with new features in the field, adding value and flexibility to the products. The ability to upgrade in the field is an added feature and can enhance the value of a product.

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00023	00025	00026	00027	00028	00029	00030	00031	00033	00034	00035	00036	00037	00038	07000	00041	00042	10000	00002	00370	00043	00044		00045	00046	00047	00048			00052		00054	00055	00056	00057	00058	00059	00060	00061	00062	00063	00064	00065
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00000027	00068		DataPoint	er: 1	pointer to data in	
0000078	000000000000000000000000000000000000000		DataArray ENDC	: 0X4	0 ;butter for storing incoming	g data
	00072					
	00073	;Macros to select	the	register bank		
	00074	;Many bank	ges can	be optimised	changes can be optimised when only one STATUS bit changes	70
	000076	Banko	MACRO		:macro to select data RAM bank	0 Ane
	00077		bcf	STATUS, RP0		
	00078		bcf	STATUS, RP1		
	00019		ENDM			
	00080					
	00081	Bank1	MACRO		;macro to select data RAM b	bank 1
	00082		bsf	STATUS, RPO		
	00083		bcf	STATUS, RP1		
	00084		ENDM			
	00085					
	00086	Bank2	MACRO		;macro to select data RAM bank	ank 2
	00087		bcf	STATUS, RP0		
	00088		bsf	STATUS, RP1		
	00080		ENDM			
	06000					
	00001	Bank3	MACRO		;macro to select data RAM bank	ank 3
	00092		bsf	STATUS, RPO		
	00093		bsf	STATUS, RP1		
	00094		ENDM			
	00095					
	0000	11				
	00097	;Reset vector co	code			
	00098					
0000	66000		ORG	00000		
	00100					
	00101	ResetVector:	movlw	high Main		
0001 008A	00102		movwf	PCLATH	;set page bits for page3	
Message[306]:	Crossing page	boundary	ensure page	bits are set.		
0002 2F2C	00103		goto	Main	;go to boot loader	
	00104					
	00102	:==========:=:::				
	00100	;Start of boot (code in	upper memory	traps accidental entry into boot	code area
	00102					
1F20	00108		ORG	0×1f20	last part of page3	
	00100		ORG	0x0f20	last part of	PIC16F873/4
	00110		ORG	0×0720	;Use last part of page0 for	PIC16F870/1

<pre>;trap if execution runs into boot code ;set correct page ;trap error and wait for reset</pre>	p to start of user code to this routine	;set correct page for reset condition	; relocated user code replaces this nop	; relocated user code replaces this nop	user code	; relocated user code replaces this nop	trap if no goto in user reset code;	;set correct page	trap error and wait for reset;		r valid code has been programmed		;0 for valid code, 0x3fff for no code				d if valid user code exists		change	T ;check pin for boot load	; if low then do bootload	; load address of CodeStatus word	; read data at CodeStatus location		;set Z flag if data is zero		t Z flag	; if not zero then is no valid code	; if zero then run user code			ew code		; indicate no reset vector code yet		; load address of CodeStatus word	;load data to indicate no program		;load data to indicate no program
high TrapError PCLATH TrapError	code to jump to survey to this to the second s	PCLATH					high TrapError1	PCLATH	TrapError1		n to show whether valid		0x3fff				I should occur and			PORTB, TEST_INPUT	Loader	LoadStatusAddr	FlashRead		EEDATA, F		STATUS, Z	TrapError2	StartUserCode			load and program new		TestByte		LoadStatusAddr	0x3f	EEDATH	0xff
movlw movwf goto	reset c ko befor	clrf	dou	dou	dou	dou	movlw	movwf	goto		locatic		DA			code routine	if a load		Bank0	btfss	goto	call	call	Bank2	movf	BankO	btfss	goto	goto			t t		clrf		call	movlw	movwf	movlw
StartOfBoot: TrapError:	;Relocated user reset code to jum ;Must be in bank0 before jumping	StartUserCode:							TrapError1:		Program memory location to		CodeStatus:		:	; Main boot code	Tests to see i		Main:									TrapError2:			:	;Start of routine		Loader:					
00112 00113 00114 00115	00117 00118 00118	00120	00121	00122	00123	00124	00125	00126		00128	00130	00131	00132	00133	00134	00135	00136	00137	00138	00139	00140	00141	00142	00143	00144	00145	00146	00147	00148	00149	00150	00151	00152	00153	00154	00155	00156	00157	00158
301F 008A 2F22		018A	0000	0000	0000	0000	301F	008A	2F2A				3 F F F							1C06	2F3A	27B5	27F6		088C		1D03	2F38	2F23					01A5		27B5	303F	008E	30FF
1F20 1F21 1F22		1F23	1F24	1F25	1F26	1F27	1F28	1F29	1F2A				1F2B							1F2E	1F2F	1F30	1F31		1F34		1F37	1F38	1F39					1F3A		1F3B	1F3C	1F3D	1F3E

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;write new CodeStatus word	;set up serial port		· · · · · · · · · · · · · · · · · · ·	t : t address and number of bytes		;get new byte from serial port	; check if ':' received		; if not then wait for next byte		;start with checksum zero		;get number of program data bytes in line	អ			; divide by 2 to get number of words		;get upper half of program start address	1		; det lower half of program start address)			divide address by 2 to get word address.			aet record type:		; check if end of file record (0x01)	; if end of file then all done				; check if regular line record (0x00)	; if not then ignore line and send '.'			;check if address < 0x2000	; which is ID locations and config bits	; if so then ignore line and send '.'	1
EEDATA FlashWrite	SerialSetup		file ctarting with	':' and e		SerialReceive	,:,	STATUS, Z	GetNewLine		Checksum		GetHexByte	0×1F	NumWords	STATUS, C	NumWords, F		GetHexByte	AddressH		GetHexByte	AddressL		STATUS. C	AddressH.F	AddressI. F		GetHexBvte	0×01	STATUS, Z	FileDone		HexByte,W	0×00	STATUS, Z	LineDone		0xe0	AddressH,W	STATUS, C	LineDone	
movwf call	call		of hev	or nea oytes af		call	xorlw	btfss	goto		clrf		call	andlw	movwf	bcf	rrf		call	movwf		call	movwf		þcf	rrf	r r r r	8	call	xorlw	btfsc	goto		movf	xorlw	btfss	goto	1	movlw	addwf	btfsc	goto)
00159 00160	00161 00162	00163 00164 ·	00165 .Gat naw line	; Get first 8	00167	00168 GetNewLine:	00169	00170	00171	00172	00173	00174	00175	00176	00177	00178	00179	00180	00181	00182	00183	00184	00185	00186	00187	00188	00189	00190	00191	00192	00193	00194	00195	00196	00197	00198	00199	00200	00201	00202	00203	00204	00205
00	000			00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
008C 27EA	27CC					2 7 D B	3A3A	1D03	2F42		01A3		27BC	391F	0 0 0 2 2	1003	0 CA2		27BC	0040		2 7BC	00A1		1003		0.041		27BC	3A01	1903	2 FAB		0826	3A00	1D03	2 FA8		30E0	0720	1803	2 FA8	
1F3F 1F40	1F41					1F42	1F43	1F44	1F45		1F46		1F47	1F48	1F49	1F4A	1F4B		1F4C	1F4D		1F4E	1F4F		1 F 5 0	1 8 2 1	1 7 5 2)	1F53	1F54	1F55	1F56		1F57	1F58	1F59	1F5A		1F5B	1F5C	1F5D	1F5E	

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_		00206 ;			
		00207 ;Get data bytes	and	checksum from line	of hex file
		00208			
1F5F	3028	00209	movlw	DataArray	
1F60	0084	00210	movwf	FSR	;set pointer to start of array
1F61	0822	00211	movf	NumWords, W	
1F62	00A4	00212	movwf	Counter	;set counter to number of words
		00213			
1F63	27BC	00214 GetData:	call	GetHexByte	;get low data byte
1F64	080	00215	movwf	INDF	;save in array
1F65	0A84	00216	incf	FSR, F	; point to high byte
		00217			
1F66	27BC	00218	call	GetHexByte	;get high data byte
1F67	080	00219	movwf	INDF	;save in array
1F68	0A84	00220	incf	FSR, F	; point to next low byte
		00221			
1F69	0BA4	00222	decfsz	Counter, F	
1F6A	2F63	00223	goto	GetData	
		00224			
1F6B	27BC	00225	call	GetHexByte	;get checksum
1F6C	0823	00226	movf	Checksum, W	; check if checksum correct
1F6D	1D03	00227	btfss	STATUS, Z	
1F6E	2 FB2	00228	goto	ErrorMessage	
		00229			
1F6F	1486	00230	bsf	PORTB, RTS_OUTPUT	UT ;set RTS off to stop data being received
		00231			
		00232 ;		1	
		00233 ;Get saved data	a one word	at a time to	program into flash
		00234			
1F70	3028	00235	movlw	DataArray	
1F71	0084	00236	movwf	FSR	;point to start of array
1F72	0822	00237	movf	NumWords, W	
1F73	00A4	00238	movwf	Counter	;set counter to half number of bytes
		00239			
		00240 ;			
		00241 ;Check if address	ess is in	I reset code area	ď
		00242			
1F74	0820	00243 CheckAddress:	movf	AddressH,W	; checking for boot location code
1F75	1D03	00244	btfss	STATUS, Z	;test if AddressH is zero
1F76	2F84	00245	goto	CheckAddress1	; if not go check if reset code received
		00246			
1F77	3 0 FC	00247	movlw	Oxfc	
1F78	0721	00248	addwf	AddressL,W	; add 0xfc (-4) to address
1F79	1803	00249	btfsc	STATUS, C	carry means add
1F7A	2F84	00250	goto	CheckAddress1	; if not go check if reset code received
		00251			
1F7B	1425	00252	bsf	TestByte,0	;show that reset vector code received

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;relocate addresses 0-3 to new location	;add low addre	;change from bank0 to bank2	;load new low address	<pre>Code + 1) ;get new location high address</pre>	;load high address	;go get data byte and program into flash				and conflicts with boot loader	CLB MILTI DOOL TOARGE	check if reset vector code received first	: then error		: ;get high byte of address		;test if less than boot code address	;yes so continue with write	;test if equal to boot code address	;no so error in high byte of address		;get low byte of address		;test if less than boot code address	;no so error in address			into flash		get high address	;change from bank0 to bank2	;load high address	;change from bank2 to bank0	;get low address	;change from bank0 to bank2	;load low address		;get low byte from array	low byte	point to high data byte	get high byte from array		point to next low data byte		write data to program memory	7
AddressL,W	low (StartUserCode + 1)		EEADR	high (StartUserCode	EEADRH	LoadData			code has been received	too bidb and confli	116111	TestBvte,0	ErrorMessage	I	high StartOfBoot	AddressH,W	STATUS, C	LoadAddress	STATUS, Z	ErrorMessage		low StartOfBoot	AddressL,W	STATUS, C	ErrorMessage			and write data ir		AddressH,W		EEADRH		AddressL,W		EEADR		INDF,W	EEDATA	FSR, F	INDF, W	EEDATH	FSR, F		FlashWrite	
movf	addlw	Bank2	movwf	movlw	movwf	goto				υ		: btfss		I	movlw	subwf	btfss	goto	btfss	goto		movlw	subwf	btfsc	goto			and data		movf	Bank2	movwf	Bank0	movf	Bank2	movwf		movf	movwf	incf	movf	movwf	incf		call	
									;Check if reset	4 - r	-	CheckAddress1																;Load address		LoadAddress:								LoadData:								
00253	00254	00255	00256	00257	00258	00259	00260	00261	00262	00263	00264			00267	00268	00269	00270	00271	00272	00273	00274	00275	00276	00277	00278	00279	00280	00281	00282		00284	00285	00286	00287	00288	00289	00290	00291	00292	00293	00294	00295	00296	00297	00298	00299
	Ŧ		0	Fr.	Fr.	ł						10	01		Ēr.	0	~	0	~	01		6	_	~	01					0		ſŦ.		_		0		0	7.1	Ŧ	0	63			~	
0821	3 E2 4		008D	301F	008F	2F9A						1C25	2 FB2		301F	0220	1C03	2F90	1D03	2 FB2		3020	0221	1803	2 FB2					0820		008F		0821		008D		0800	0080	0A84	0800	008E	0A84		27EA	
1F7C	1F7D		1F80	1F81	1F82	1F83						1F84	1F85		1F86	1F87	1F88	1F89	1F8A	1F8B		1F8C	1F8D	1F8E	1F8F					1F90		1F93		1F96		1F99		1F9A	1F9B	1F9C	1F9D	1F9E	1F9F		1FA0	

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1FA3	OFA1	00300 00301		Bank0 incfsz	AddressL, F	;change from bank3 to bank0 ;increment low address byte
1FA4	2 FA6	00302		goto	CheckLineDone	roll
1FA5	OAAO	00303		incf	AddressH, F	; if so then increment high address byte
		00304				
1FA6	0BA4	00305	CheckLineDone:	decfsz	Counter, F	; check if all words have been programmed
1FA7	2F74	00306		goto	CheckAddress	; if not then go program next word
		00307				
		00308				
		00309	;Done programming	line	of file	
		00310				
1FA8	302氏	00311	LineDone:	movlw		; line has been programmed so
1FA9	27E2	00312		call	SerialTransmit	transmit progress indicator back
$1 \mathrm{FAA}$	2F42	00313		goto	GetNewLine	;go get next line hex file
		00314				
		00315	:			
		00316	;Done programming	file	so send success i	indicator and trap execution until reset
		00317				
1 FAB	3053	00318	FileDone:	movlw	'S'	programming complete so
1FAC	27E2	00319		call	SerialTransmit	transmit success indicator back
		00320				
1 FAD	27B5	00321		call	LoadStatusAddr	;load address of CodeStatus word
1 FAE	018E	00322		clrf	EEDATH	;load data to indicate program exists
1FAF	018C	00323		clrf	EEDATA	;load data to indicate program exists
1FB0	2 7 EA	00324		call	FlashWrite	
1FB1	2FB1	00325	TrapFileDone:	goto	TrapFileDone	; all done so wait for reset
		00326				
		00327	:			
		00328	;Error in hex fi	file so s	send failure indicator	ator and trap error.
		00329				
1FB2	3046	00330	ErrorMessage:	movlw	' 玊'	; error occurred so
1FB3	27E2	00331		call	SerialTransmit	transmit failure indicator back
1FB4	2FB4	00332	TrapError3:	goto	TrapError3	trap error and wait for reset
		00333				
		00334				
		00335	;Load address of	CodeStatus	word into	flash memory address registers
		00336	;This routine re	returns i	in bank2	
		00337				
		00338	LoadStatusAddr:	Bank2		;change from bank0 to bank2
1FB7	301F	00339		movlw	high CodeStatus	igh addr of Coc
1FB8	008F	00340		movwf	EEADRH	
1FB9	3 0 2 B	00341		movlw	low CodeStatus	; load low addr of CodeStatus location
1 FBA	008D	00342		movwf	EEADR	
1FBB	0008	00343		return		
		00344				
		00345				
		00346	Receive two	ascii digits	ts and convert into one	ito one hex byte

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	00336 3	0000	0000E		00394	8 00394 return	
<pre>;Transmit byte in W register ;This routine returns in bank SerialTransmit: Bank0 btfss PRR1 goto \$-1 pgoto \$-1 movwf TXREG return ;Write to a location in the f ;Address in EEADRH and EEADR, ;This routine returns in bank FlashWrite: Bank3 movwf EECON movlw 0x55 movwf EECON bsf EECON bsf EECON bsf EECON hop nop nop return ;</pre>	003397;Transmit byte in W register00398;This routine returns in bank00399serialTransmit: Bank000401btfsc PORTE00402btfss PIR1,00403goto00404btfss PIR1,00404goto00405btfss PIR1,00406goto00407ptfss PIR1,00407goto00407ptfss PIR1,00407goto00407goto00407ptfss pirn1,00407movwf TXREC00408gotoptfss pirn1,00407goto00407goto00408gotoptfss pirn1,00407goto00407goto00417goto00418goto00419goto00412movulm oxes00413goto00414movulm oxes00415movulw oxes00416movulw oxes00417movulw oxes00418movulw oxes00419movulw oxes00419movulw oxes00420movulw oxes00421movulw oxes00422movulw oxes00423movulw oxes00423movulw oxes00423movulw oxes00423movulw oxes00423movulw oxes00423movulw oxes00423movulw oxes00423movulw oxes00423movulw oxes00423	00396 ;	00395 ;Transmit byte in W register 00399 ;This routine returns in bank 00399 serialTransmit barko 00399 serialTransmit: Banko 00401 btfsc PORTE 00402 betfsc PORTE 00403 btfsc PORTE 00404 btfsc PORTE 00405 btfsc PORTE 00406 btfsc PORTE 00407 btfsc PORTE 00408 return 00409 movwf 00407 return 00410 poto a location in the f 00411 rhis routine returns in bank 00412 movukf 00413 FlashWrite: 00419 movukf 00419 movukf 00419 movukf 00419 movukf 00419 movukf 00411 movukf 00412 movukf 00413 movukf 00420 movukf 00420 movukf 00421 movukf 00422 movukf 0	00395 ;Transmit byte in W register 00398 ;This routine returns in bank 00399 SerialTransmit: BankO 00401 SerialTransmit: BankO 00402 SerialTransmit: BankO 00403 SerialTransmit: BankO 00404 SerialTransmit: BankO 00406 SerialTransmit: BankO 00407 SerialTransmit: BankS 00408 SerialTransmit: BankS 00410 ;Address in EEADRH and EECON 00411 ;This routine returns in bank 00413 FlashWrite: Bank3 00414 movuf EECON 00419 00413 movuf EECON 00419 movuf EECON 0042 movuf EECON 0042 movuf EECON 0042 movuf EECON 0042 movuf EECON 0043 stead from a location in the 0042 movuf EECON	00395 ;Transmit byte in W register 00398 ;This routine returns in bank 00399 ;This routine returns in bank 00399 ;SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 SerialTransmit: Bank0 00403 SerialTransmit: Bank0 00404 Boto 00405 SerialTransmit: Bank0 00406 Movuf 00407 SerialTransmit: Bank0 00407 Movuf 00407 SerialTransmit: Bank0 00408 Serieturn 00409 Write to a location in the f 00411 Fhis routine returns in bank0 00412 Sharkite: 00413 FlashWrite: 00416 movuf 00417 movuf 00418 movuf 00419 movuf 00419 movuf 00419 movuf 00420 Soutu 00421 Soutu 00422 Soutu 00423 Soutu 00424 Soutu 00	003395 ;Transmit byte in W register 003397 ;Transmit byte in W register 003398 ;This routine returns in bank 003399 SerialTransmit: BankO 00401 Betfsc <fortb< td=""> 00402 SerialTransmit: BankO 00403 Betfsc<fortb< td=""> 00404 Betfsc<fortb< td=""> 00405 Betfsc<fortb< td=""> 00406 SerialTransmit: BankO 00407 Betfsc<fortb< td=""> 00407 Betfsc<fortb< td=""> 00407 SerialTransmit: BankO 00408 FrankI 00407 SerialTransmit: BankO 00413 FlashWrite: Bank3 00415 MovUW 00416 MovUW 00417 MovUW 00418 MovUW 00419 MovUW 00412 MovUW 00413 MovUW 00414 MovUW 00415 MovUW 00416 MovUW 00417 MovU 00418 MovU 00422 MovU 00423 MovU</fortb<></fortb<></fortb<></fortb<></fortb<></fortb<>	00395 7 Transmit byte in W register 00398 This routine returns in bank 00399 SerialTransmit Bank0 00400 SerialTransmit: Bank0 00401 Beffsc PORTE 00405 00405 SerialTransmit: Bank0 00405 00405 SerialTransmit in bank0 00405 00406 SerialTransmit in bank0 00406 SerialTransmit in bank1 00407 Transmit in bank3 00411 This routine returns in bank3 00412 StashWrite: Bank3 00414 movum EECON 00416 00418 Bank3 00416 SerialTransmit in bank3 00417 SerialTransmit in bank3 00418 Serial EEADRH and EECON 00419 Serial EEADRH and EECON
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00401 SerialTransmit: Bank0 00402 D0402 btfsc PORTB,CTS_INPUT 00403 btfsc PORTB,CTS_INPUT 00406 \$-1 00405 btfss PIR1,TXIF 00406 ;*1 00406 ;*1 00407 return 00409 ;Write to a location in the flash progra 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00412 return 00412 return 00x84 00413 FlashWrite: Bank3 00414 movuf EECON1 00415 00416 movuf EECON1 00415 00416 movuf EECON1 00415 00416 movuf EECON1 00416 movuf EECON1 00415 00416 movuf EECON1 00416 movuf EECON1 00417 00422 bsf EECON1,WR 00423 nop 00424 return 00426 return 00426 return 00426 return 00427 pop 00427 return 00426 return 00426 return 00426 return 00426 return 00426 return 00427 return 00426 return	00397;Transmit byte in W register from USART00398;This routine returns in bank000400SerialTransmit: Bank000401btffsc00402SerialTransmit: Bank000403stin00404goto00404stin00405btffsc00406stin00407goto00408return00409imovwf00409stin00401stelurn00403return00404imovwf00409imovwf00400stelurn00410jadress in EEADRH and EEADR, data in EE00411jThis routine returns in bank300411jThis routine returns in bank300411jThis routine returns in bank300411jThis movuf00412movwf00413FlashWrite:00414movuf00415movuf00415movuf00416movuf0041700421bff00421bff00422bff00423movuf00424movuf00425bff00426steurn00427movuf00428steurn00429steurn00420steurn00420steurn00421steurn00422steurn00423steurn00426steurn00427steurn00428steurn00429<	<pre>00396 ;</pre>	00395 ;Triss routine returns in bank0 00398 ;This routine returns in bank0 00398 ;This routine returns in bank0 00401 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 SerialTransmit: Bank0 00403 btfss PTRL,TXIF 00405 return 00406 return 00406 return 00407 ;TREG 00408 ;Write to a location in the flash progra 00401 ;Address in EEADRH and EEADR, data in EE 00411 ;This routine returns in bank3 00413 flashWrite: Bank3 00411 ;This routine returns in bank3 00413 movyf EEAOR1 00415 00415 movuf EECON1 00416 00415 movuf EECON1 00416 00416 movuf EECON1 00417 00416 movuf EECON1 00418 00417 00416 movuf EECON1 00417 00416 movuf EECON1 00417 00416 movuf EECON1 00417 00416 movuf EECON1 00418 00417 00416 movuf EECON1 00419 programov feecon2 00419 movuf EECON1 0042 shdress in EEADRH and EEADR, data in EE 0042 shdress is in EEADRH and EEADR, data return 0042 shdress is in EEADRH and EEADR, data return 0042 shdress is in EEADRH and EEADR, data return 0042 shdress is in EEADRH and EEADR, data return 0043 shdress is in EEADRH and EEADR, data return	00395 ; Transmit byte in W register from USART 00396 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00403 SerialTransmit: Bank0 00403 SerialTransmit: Bank0 00403 SerialTransmit: Bank0 00405 btfss prR1, TXIF 00406 return 00405 return 00406 return 00407 return 00407 return 00408 ; 77716 return in the flash program 00411 ; This routine returns in bank3 00412 movut EECON1 00413 FlashWrite: Bank3 00413 PlashWrite: Bank3 00416 movut EECON1 00416 movut 0x55 00417 movut EECON1 00418 movut EECON1 00418 movut EECON1 00418 movut EECON1 00419 movut EECON1 00417 movut EECON2 00417 movut EECON2 00418 movut EECON2 00418 movut EECON2 00419 movut EECON2 00420 movut EECON2 00423 popp 00423 return 00423 popp 00423 return 00423 popp 00423 return 00423 popp 00423 return 00423 popp 00423 return 00423 popp 00423 return 00423 popp 00423 popp 00424	00395 7.Transmit byte in W register from USART 00399 7.Transmit byte in W register from USART 00399 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00403 Betfss PTR1,TX1F 00403 btfss PTR1,TX1F 00406 *1 00406 *1 00406 *1 00406 *1 00406 *1 00406 *1 00407 *1 00406 *1 00407 *1 00406 *1 00406 *1 00406 *1 00406 *1 00406 *1 00406 *1 00406 *1 00407 *1 00406 *1 00406 *1 00406 *1 00406 *1 00406 *1 00407 *1 00406 *1 00406 *1 00406 *1 00407 *1 00406 *1 00406 *1 00407 *1 00408 *1 00410 *2 00411 *This routine returns in bank3 00411 *This routine returns in bank3 00412 *0 00412 *0 00412 *0 00413 FlashWrite: Bank3 00411 *This routine returns in bank3 00412 *0 00412 *0 00413 *0 00413 *0 00413 *0 00413 *0 00410 *0 00411 *0 00410 *0 00411 *0 00411 *0 00412 *0 00411 *0 00412 *0 00413 *0 00410 *	00395 ;Transmit byte in W register from USART 00396 ;This routine returns in bank0 00309 ;This routine returns in bank0 00401 btfsc PORTB,CTS_INPUT 00403 SerialTransmit: Bank0 00404 goto \$-1 00406 return 00406 return 00406 return 00407 j.Mrite to a location in the flash progra 00409 ;Write to a location in the flash progra 00401 ;Address in EADRH and EADR, data in EB 00413 flashWrite: Bank3 00413 flashWrite: Bank3 00413 movuf EECON1 00418 movuh 0x84 00416 movlw 0x55 00418 movuh 0x55 00419 00416 movuh 0x55 00419 movuh EECON1,WR 00420 00418 movuh EECON1,WR 00421 movuh 0x55 00419 movuh 0x55 00419 movuh 0x55 00419 movuh EECON1,WR 00423 movuf EECON1,WR 00423 popp 00423 popp 00424 return 00423 popp 00425 in EADRH and EEADRA	00395 ;Transmit byte in W register from USART 00396 ;Transmit byte in W register from USART 00309 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00403 btfss PIRL,TXIF 00406 coto \$-1 00406 return 00407 return 00407 return 00407 return in the flash progra 00407 return in bank3 00412 movulm exeturns in bank3 00413 FlashMrite: Bank3 00413 PlashMrite: Bank3 00418 movum EECON1 00419 movum EECON1 00419 movum EECON1 00419 movum EECON1,WR 00419 movum EECON1,WR 00419 movum EECON1,WR 00419 movum EECON1,WR 00420 movum EECON1,WR 00420 movum EECON1,WR 00421 movum EECON1,WR 00423 fread from a location in the flash programov 00423 fread from a location in the flash program 00423 prodime is only called once and can be
00337 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00403 btfsc PORTB,CTS_INPUT 00405 btfss PIRI,TXIF 00406 \$-1 00406 \$-1 00406 \$-1 00406 return 00406 \$-1 00407 ptte to a location in the flash progra 00410 ;Address in EEADRH and EEADR, data in EE 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00412 movuf EECON1 00415 movuf EECON1 00415 movuf EECON1 00415 movuf EECON1 00416 movuf EECON1 00415 movuf EECON1 00415 00416 movuf EECON1 00415 movuf EECON1 00420 00421 bsf EECON1,WR 00420 00421 bsf EECON1,WR 00426 return 00426 return 00426 popriodic from a location in the flash progra	<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfss PDRTB,CTS_INPUT 00402 btfss PIR1,TXIF 00403 cto \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00407 \$</pre>	00306 ; Transmit byte in W register from USART 00399 ; Tris routine returns in bank0 00401 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00403 btfss prR1, TXIF 00403 btfss prR1, TXIF 00406 return 00406 return 00407 propertion in the flash progra 00409 ; Write to a location in the flash progra 00410 ; Address in EEADRH and EEADR, data in EE 00411 ; This routine returns in bank3 00412 movwf EECON1 00413 FlashWrite: Bank3 00413 FlashWrite: Bank3 00415 movvf EECON1 00416 movlw 0x84 00416 movlw 0x84 00415 movvf EECON2 00417 movvf EECON2 00418 movvf EECON2 00418 movvf EECON2 00417 movvf EECON2 00418 movvf EECON2 00418 movvf EECON2 00418 movvf EECON2 00418 movvf EECON2 00419 movvf EECON2 00420 bsf EECON1, WR 00420 movvf EECON2 00421 mov bsf EECON2 00421 return 00426 return	00395 00396 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00402 SerialTransmit: Bank0 00403 btfss FrL,TKIF 00404 goto 5-1 00405 return 00406 return 00406 return 00407 return 00409 ;Mrite to a location in the flash progra 00411 ;This routine returns in bank3 00412 movuf ERADRH and ERADR, data in EB 00413 FlashWrite: Bank3 00413 PlashWrite: Bank3 00416 movuf 0x84 00419 movuf 0x84 00419 movuf 0x84 00419 movuf 0x84 00419 movuf EECON1,WR 00419 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1,0055 00419 movuf EECON1,WR 00420 movuf EECON1,WR 00421 popt	00395 ;rransmit byte in W register from USART 00396 ;rhis routine returns in banko 00400 SerialTransmit byte in W register from USART 00401 SerialTransmit: Banko 00403 SerialTransmit: Banko 00405 btfss PIRI,TXIF 00405 return 00406 return 00406 return 00406 return 00407 return 00407 return 00417 movwf TXREG 00413 FlashMrite: Bank3 00413 PlashMrite: Bank3 00413 PlashMrite: Bank3 00414 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1 00420 00419 movuf EECON1,WR 00420 00419 movuf EECON1,WR 00420 00419 movuf EECON1,WR 00420 00419 movuf EECON1,WR 00421 popt	00395 00396 ;Transmit byte in W register from USART 00399 ;This routine returns in bank0 00400 SerialTransmit : Bank0 00401 btfsc PORTB,CTS_INPUT 00403 SerialTransmit : Bank0 00404 goto \$-1 00406 return 00406 return 00407 jwrite to a location in the flash progra 00413 flashMrite: Bank3 00413 FlashMrite: Bank3 00419 movwf ESCON1 00419 movvf ESCON2 00419 movvf ESCON2 00419 movvf ESCON2 00419 movvf ESCON2 00419 movvf ESCON1 00419 movvf ESCON2 00419 movvf ESCON2 00420 movvf ESCON2 00420 movvf ESCON2 00420 movvf ESCON2 00420 movvf ESCON2 00420 movvf ESCON2 00421 movvf ESCON2 00420 movvf ESCON2 004	00395 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 schalTransmit Bank0 00400 SerialTransmit: Bank0 00401 schalTransmit: Bank0 00405 btfss PIRL,TXIF 00405 btfss PIRL,TXIF 00405 return 00406 return 00406 return 00407 ;Address in EEADRH and EEADR, data in EE 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00413 PashWrite: Bank3 00414 movWf EECON1 00418 movlw 0x84 00419 movlw 0x84 00419 00418 movlw 0x84 00416 00418 movlw 0x84 00418 00419 movlw 0x84 00418 00419 movlw 0x84 00419 00418 movlw 0x84 00418 00418 movlw 0x84 00419 movlw 0x84 00418 movlw 0x84 00419 movlw 0x84 00420 psf EECON1,WR 00420 00420 movlw 0x84 00421 movlw 0x84 00420 movlw 0x84	00395 ;Transmit byte in W register from USART 00396 ;This routine returns in bank0 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 00403 btfss PIRL,TXIF 00405 btfss PIRL,TXIF 00406 serial poly 00406 serial poly 00407 seturn 00407 seturn in the flash progra 00410 ;Address in EEADRH and EEADR, data in EE 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00414 movum EECON1 00415 00418 movum Secon2 00413 flashMrite: Bank3 00414 movum Secon2 00413 00414 movum Secon2 00415 00416 movly Sea 00415 00416 movum Secon2 00416 movum Secon2 00417 popt secon2 00420 00420 movum Secon2 00420 00420 movum fecon2 00420 00420 movum fecon2 00420 psf secon2 00421 psf EECON1,WR 00426 movum fecon2 00427 psd from a location in the flash programs 00428 ;Read from a location in the flash programs 00428 ;Read from a location in the flash programs 00428 ;Read from a location in the flash programs 00420 pst secon2 00420 movum fecon1 00426 psd from a location in the flash programs 00420 pst programs
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check t 00403 btfss PR1,TXIF ;check t 00405 return 00406 return 00406 return 00406 return 00409 ;Mrite to a location in the flash program memory 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00412 movwf EECON1 00413 FlashWrite: Bank3 00415 movvf EECON1 00416 movvf EECON1 00415 movvf EECON1 00415 movvf EECON1 00415 movvf EECON1 00417 movvf EECON1 00418 movvf EECON1 00418 movvf EECON1 00419 photen movvf EECON1 00417 movvf EECON1 00419 movvf EECON1 00419 movvf EECON1 00419 movvf EECON1 00419 movvf EECON1 00419 movvf EECON1 00419 movvf EECON1 0042 movvf EECON1 0042 movvf EECON1 0042 movvf EECON1 0042 movvf EECON1,WR ;begin w 0042 movvf EECON1,WR program memor 0042 in EEADRH and EEADRH and EEADR, data returned i	<pre>00337 ;Transmit byte in W register from USART 00338 ;This routine returns in bank0 00308 GerialTransmit: Bank0 00401 Betfsec PORTB,CTS_INPUT ;check C 00402 Betfsec PORTB,CTS_INPUT ;check C 00403 btfss PIRI,TXIF ;check C 00405 return poto \$-1 00406 return rxREG ;transmi 00407 return return 00408 return memory 00401 ;This routine return in the flash program memory 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00413 FlashWrite: Bank3 00413 FlashWrite: Bank3 00414 movvf EECON1 00416 movvf EECON1 00417 movth 0x55 ;change 00418 movvf EECON1 00417 movth 0x55 ;change 00418 movvf EECON1 00417 movth 0x65 in beform 00418 movvf EECON1 00418 movvf EECON1 00419 movth BECON1,WR ;begin w 00420 movth EECON1,WR ;begin w 00421 mov 00421 movth Bank3 mov 00421 movth EECON1 00421 movth EECON1 00421 movth EECON2 00421 movth EECON2 00422 movth EECON2 00423 stend from a location in the flash program memor 00428 ;faed from a location in the flash program memor 00428 ;hddress is in EEADRH and EEADR, data returned i</pre>	00306;	003395 ;Transmit byte in W register from USART 003397 ;Transmit byte in W register from USART 003398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfss PIRI,TXIF ;check c 00403 btfss PIRI,TXIF ;check t 90405 s-1 00406 return 00407 return 00407 return 00408 ;return 00408 ;return 00401 ;Address in EEADRH and EADR, data in EEDATH and 00401 ;This routine returns in bank3 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00413 FlashWrite: Bank3 00413 FlashWrite: Bank3 00414 movvk EECON1 00416 movlw 0x55 ;change 00413 FlashWrite: Bank3 00413 routine returns in bank3 00414 movvk EECON1 00415 movlw 0x55 ;change 00416 movlw 0x55 ;change 00417 movlw 0x55 ;change 00418 movvk EECON1 00417 movlw 0x55 mov 00420 movvk EECON2 00418 movvk EECON2 00419 movvk EECON1 00419 movvk EECON2 00419 movvk EECON2 00419 movvk EECON2 00419 movvk EECON2 00420 movvk EECON2 004	0039500396003970139701398013990139901399013990139901399013990139001391014010140201403014030140401404014050140501406014070140801408014090140901409014090140901409014090140901409014090140901409014090140901409014111	0039500396003960039701397013980139901399013990140001400014010140101402014030140301404014040140501406014070140701408014090140901409014090140901409014090140901409014090140901409014090141001410014111	00395 7 Transmit byte in W register from USART 00398 7 This routine returns in bankO 00400 SerialTransmit: BankO 00401 btfsc PORTB,CTS_INPUT;check C 00403 btfss PIR1,TKIF ;check C 00404 goto \$-1 00405 transmi return 00405 return 00405 stalTransmit return 00406 stal 00406 stal 00407 rxREG ;transmi 00408 ptrace a location in the flash program memory 00410 ptraces in EEADRH and EEADR, data in EEDATH and 00411 fThis routine returns in bank3 00412 movuk EECON1 00413 flashWrite: Bank3 00413 flashMrite: Bank3 00414 movuk EECON1 00418 movuk EECON1 00419 movuk EECON2 00419 movuk EECON2 00419 movuk EECON1 00419 movuk EECON2 00419 movuk EECON2 00420 movuk EECON	00395 7 Transmit byte in W register from USART 00398 7 Transmit byte in W register from USART 00398 7 Transmit byte in W register from USART 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIR1,TXIF ;check C 00405 btfss PIR1,TXIF ;check T 00405 btfss PIR1,TXIF ;check T 00405 btfss PIR1,TXIF ;check T 00405 btfss program memory 00406 struthe return in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 movvé EECON1 00413 FlashWrite: Bank3 00414 movvé EECON1 00416 movvé EECON1 00419 movvé EECON1 00419 movvé EECON1 00419 movvé EECON1 00419 movvé EECON2 00419 movvé EECON2 00419 movvé EECON2 00419 movvé EECON2 00419 movvé EECON2 00420 movvé EECON2 00420 movvé EECON2 00421 return 00420 movvé EECON2 00421 movvé EECON2 00421 movvé EECON2 00420 movvé EECON2 00421 movvé EECON2 00421 movvé EECON2 00421 movvé EECON2 00420 movvé EEC
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT;check C 00403 btfss PTR1,TXIF ;check t 00404 goto \$-1 movwf TXREG ;transmi 00406 return 00406 return 00409 ;Write to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00413 flashWrite: Bank3 00416 movuk EECON1 00416 movuk EECON1 00418 movuk EECON1,WR ;begin w 00422 00419 movuk EECON1,WR ;begin w 00423 treturn opp	<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00403 SerialTransmit: Bank0 00403 btfss PIR1,TXIF ;check c 90403 btfss PIR1,TXIF ;check t 90405 s-1 00407 00407 return 00408 ;</pre>	00306 ;	003395 ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	00395 ;rransmit byte in W register from USART 00396 ;rransmit byte in W register from USART 00399 ;rransmit byte in W register from USART 00399 ;rransmit byte in W register from USART 00399 srailTransmit: Bank0 00401 butfss 00402 butfss 00403 poto 00404 goto 00405 butfss 00406 poto 00407 poto 00408 return 00409 imovef 00409 imovef 00409 imovef 00409 imovef 00409 imovef 00410 imovef 00411 imovef 00412 imovef 00413 flashbrite: 00414 movuf 00415 movuf 00416 movuf 00417 movuf 00418 movuf 00419 movuf 00411 insebard 00412 movuf 00413	003950039600396003970139701398013990139901399014000140001401014010140201403014030140401404014040140501407014070140801409014090140901409014090140901409014100141001410014110141201412014130141401414014140141501415014160141601417014180141801419<	00395 7 Transmit byte in W register from USART 00398 7 This routine returns in banko 00400 SerialTransmit: Banko 00401 btfsc PORTB,CTS_INPUT ;check c 00403 btfss PIR1,TXIF ;check c 00404 btfss PIR1,TXIF ;check c 00405 btfss in bank3 00401 jthis routine returns in bank3 00411 jThis routine returns in bank3 00412 ptdfress in EEADRH and EEADR, data in EEDATH and 00413 flashWrite: Bank3 00414 movWf EECON1 00415 00414 movVf EECON1 00416 00414 movVf EECON1 00416 00414 movVf EECON1 00417 movVf EECON2 00418 movVf EECON2 00419 movVf EECON2 00419 movVf EECON2 00419 movVf EECON2 00419 movVf EECON2 00419 movVf EECON2 00420 movVf EECON2 00421 return 00428 from a location in the flash program memor 00428 jtend from a location in the flash program memor 00428 jtend from a location in the flash program memor	00395 7 This routine returns in banko 00398 7 Transmit byte in W register from USART 00398 7 This routine returns in banko 00400 SerialTransmit: Banko 00401 SerialTransmit: Banko 00403 btfss PORTB/CTS_INPUT ;check C 00403 btfss PIR1,TXIF ;check C 00406 \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00408 return 00400 preter solution the flash program memory 00410 preter solution in the flash program memory 00410 preter solution in the flash program memory 00411 prhis routine returns in bank3 00412 movvf BECON1 00413 flashWrite: Bank3 00414 movVf BECON1 00419 movVf BECON1 00419 movVf BECON2 00419 movVf BECON2 00419 movVf BECON2 00419 movVf BECON2 00419 movVf BECON2 00419 movVf BECON2 00419 movVf BECON2 00420 movVf BECON2 00420 movVf BECON2 00420 movVf BECON2 00421 return 00420 movVf BECON2 00420 movVf BECON2 00420 movVf BECON2 00421 movVf BECON2 00420
<pre>00337 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00309 serialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfss PIRL,TXIF ;check C 00403 btfss PIRL,TXIF ;check C 00405 btfss PIRL,TXIF ;check L 00406 return 00407 return 00407 return 00408 ;</pre>	003397;Transmit byte in W register from USART00338;This routine returns in bank000339;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402btfss00403btfss00404btfss00405btfss00406s-100407btfss00407return00408return00409jwrite to a location in the flash program memory00410jAddress in EEADRH and EEADR, data in EEDATH and00411jThis routine returns in bank300412movwf00413FlashWrite:00414movvf00413secon100414movvf00415movvf00416movvf00413secon200413secon200414movvf00415movvf00415movvf00416movvf00417movvf00418movvf00419secon200419movvf00412secon200413movvf00414movvf00415movvf00416movvf00417movvf00418secon200419movvf00419secon200411secon200413secon200414movvf00415secon200416movvf00421secon200422 <td>00396;</td> <td>00335 ; This routine returns in bank0 00399 ; Transmit byte in W register from USART 00399 ; Transmit byte in W register from USART 00400 SerialTransmit: Bank0 00401 btfss PIRI,TKIF ; check C 90to \$-1 btfss PIRI,TKIF ; check C 00405 movy TXREG \$-1 00407 ; movy f goto \$-1 00408 ;</td> <td>003350033500336;Transmit byte in W register from USART00338;This routine returns in bank000339srialTransmit: Bank000401btfss00402goto00403btfss00404goto00405btfss00406s-100407goto00408return00409jrite00401return00403sreturn00404set00405set00406set00407set00408return00409jrite00409jrite00401jrite00401jrite00402set00403jrite00410jodt00411jodt00412movuf00412movuf00413flashprogram memory00414movuf00415movuf00415movuf00416movuf00415movuf00416movuf00417movuf00418movuf00419movuf00419movuf00419movuf00410movuf00411movuf00412movuf00412movuf00413movuf00413movuf00414movuf00415movuf00416movuf00417movuf00418movuf<</td> <td>00395 7.Transmit byte in W register from USART 00398 7.Transmit byte in W register from USART 00399 Could SerialTransmit: Banko 00400 SerialTransmit: Banko 00401 btfsc PORTB,CTS_INPUT ;check c 00403 btfss PIRI,TXIF ;check c 00405 c \$-1 00405 return 00406 return 00406 return 00406 return 00400 jff reto a location in the flash program memory 00410 jfddress in EEADRH and EEADR, data in EEDATH and 00411 jff routine returns in bank3 00413 flashWrite: Bank3 00414 movWf EECON1 00411 jff routine returns in bank3 00418 movWf EECON1 00419 movWf EECON1 00419 movWf EECON1 00419 movVf EECON1 00416 movVf EECON1 00419 movVf EECON1 00416 movVf EECON1 00416 movVf EECON1 00417 movVf EECON1 00417 movVf EECON1 00418 movVf EECON1 00418 movVf EECON1 00419 movVf EECON1 00419 movVf EECON1 00419 movVf EECON1 00419 movVf EECON1 00419 movVf EECON1 00419 movVf EECON1 00410 movVf EECON1 00410 movVf EECON1 00410 movVf EECON1 00410 movVf EECON1 00411 movVf EECON1 00411 movVf EECON1 00411 movVf EECON1 00411 movVf EECON1 00415 movVf EECON1 00416 movVf EECON1 00417 movVf EECON1 00417 movVf EECON1 00418 movVf EECON1 00419 movVf EECON1 00419 movVf EECON1 00410 movVf EECON2 00410 movVf EECON2</td> <td>00395 7 Transmit byte in W register from USART 00398 7 This routine returns in bankO 00400 00401 SerialTransmit: BankO 00403 SerialTransmit: BankO 00405 SerialTransmit: BankO 00405 SerialTransmit strant 00406 SerialTransmit strant 00407 SerialTransmit strant 00408 SerialTransmit strant 00409 SerialTransmit strant 00408 SerialTransmit strant 00408 SerialTransmit strant 00409 SerialTransmit strant 00400 SerialTransmit strant 00400 SerialTransmit strant 00401 SerialTransmit strant 00410 SerialTransmit strant 00410 SerialTransmit strant 00411 SerialTrant strant 00411 SerialTrant strant strant strant 00411 SerialTrant strant strant strant strant strant 00411 Serial strant s</td> <td>00395 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00403 SerialTransmit: Bank0 00404 btfss PIRL,TXIF ; check C 00405 btfss PIRL,TXIF ; check t 00406 s-1 00406 s-1 00406 s-1 00406 s-1 00406 s-1 00407 return 00407 return in the flash program memory 00401 ; This routine returns in bank3 00411 ; This routine returns in bank3 00411 ; This routine returns in bank3 00412 movif EECON1 00418 movif EECON1 00418 movif EECON1 00419 movif EECON1 00419 movif EECON1 00410 movif EECON1 00410 movif EECON1 00410 movif EECON1 00411 movif EECON1 00415 movif EECON1 00416 movif EECON1 00416 movif EECON1 00417 movif EECON1 00418 movif EECON1 00418 movif EECON1 00419 movif EECON1 00419 movif EECON1 00419 movif EECON1 00410 movif EECON1 00410 movif EECON2 00420 movif EECON2 00421 movif EECON2 00421 movif EECON2 00421 movif EECON2 00421 movif EECON2 00422 movif EECON2 00423 movif EECON2 00423 movif EECON2 00423 movif EECON2 00424 movif EECON2 00424 movif EECON2 00425 movif EECON2 00426 movif EECON2 00427 movif EECON2 00427 movif EECON2 00427 movif EECON2 00428 movif EECON2 00428 movif EECON2 00429 movif EECON2 00420 mov</td>	00396;	00335 ; This routine returns in bank0 00399 ; Transmit byte in W register from USART 00399 ; Transmit byte in W register from USART 00400 SerialTransmit: Bank0 00401 btfss PIRI,TKIF ; check C 90to \$-1 btfss PIRI,TKIF ; check C 00405 movy TXREG \$-1 00407 ; movy f goto \$-1 00408 ;	003350033500336;Transmit byte in W register from USART00338;This routine returns in bank000339srialTransmit: Bank000401btfss00402goto00403btfss00404goto00405btfss00406s-100407goto00408return00409jrite00401return00403sreturn00404set00405set00406set00407set00408return00409jrite00409jrite00401jrite00401jrite00402set00403jrite00410jodt00411jodt00412movuf00412movuf00413flashprogram memory00414movuf00415movuf00415movuf00416movuf00415movuf00416movuf00417movuf00418movuf00419movuf00419movuf00419movuf00410movuf00411movuf00412movuf00412movuf00413movuf00413movuf00414movuf00415movuf00416movuf00417movuf00418movuf<	00395 7.Transmit byte in W register from USART 00398 7.Transmit byte in W register from USART 00399 Could SerialTransmit: Banko 00400 SerialTransmit: Banko 00401 btfsc PORTB,CTS_INPUT ;check c 00403 btfss PIRI,TXIF ;check c 00405 c \$-1 00405 return 00406 return 00406 return 00406 return 00400 jff reto a location in the flash program memory 00410 jfddress in EEADRH and EEADR, data in EEDATH and 00411 jff routine returns in bank3 00413 flashWrite: Bank3 00414 movWf EECON1 00411 jff routine returns in bank3 00418 movWf EECON1 00419 movWf EECON1 00419 movWf EECON1 00419 movVf EECON1 00416 movVf EECON1 00419 movVf EECON1 00416 movVf EECON1 00416 movVf EECON1 00417 movVf EECON1 00417 movVf EECON1 00418 movVf EECON1 00418 movVf EECON1 00419 movVf EECON1 00419 movVf EECON1 00419 movVf EECON1 00419 movVf EECON1 00419 movVf EECON1 00419 movVf EECON1 00410 movVf EECON1 00410 movVf EECON1 00410 movVf EECON1 00410 movVf EECON1 00411 movVf EECON1 00411 movVf EECON1 00411 movVf EECON1 00411 movVf EECON1 00415 movVf EECON1 00416 movVf EECON1 00417 movVf EECON1 00417 movVf EECON1 00418 movVf EECON1 00419 movVf EECON1 00419 movVf EECON1 00410 movVf EECON2 00410 movVf EECON2	00395 7 Transmit byte in W register from USART 00398 7 This routine returns in bankO 00400 00401 SerialTransmit: BankO 00403 SerialTransmit: BankO 00405 SerialTransmit: BankO 00405 SerialTransmit strant 00406 SerialTransmit strant 00407 SerialTransmit strant 00408 SerialTransmit strant 00409 SerialTransmit strant 00408 SerialTransmit strant 00408 SerialTransmit strant 00409 SerialTransmit strant 00400 SerialTransmit strant 00400 SerialTransmit strant 00401 SerialTransmit strant 00410 SerialTransmit strant 00410 SerialTransmit strant 00411 SerialTrant strant 00411 SerialTrant strant strant strant 00411 SerialTrant strant strant strant strant strant 00411 Serial strant s	00395 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00403 SerialTransmit: Bank0 00404 btfss PIRL,TXIF ; check C 00405 btfss PIRL,TXIF ; check t 00406 s-1 00406 s-1 00406 s-1 00406 s-1 00406 s-1 00407 return 00407 return in the flash program memory 00401 ; This routine returns in bank3 00411 ; This routine returns in bank3 00411 ; This routine returns in bank3 00412 movif EECON1 00418 movif EECON1 00418 movif EECON1 00419 movif EECON1 00419 movif EECON1 00410 movif EECON1 00410 movif EECON1 00410 movif EECON1 00411 movif EECON1 00415 movif EECON1 00416 movif EECON1 00416 movif EECON1 00417 movif EECON1 00418 movif EECON1 00418 movif EECON1 00419 movif EECON1 00419 movif EECON1 00419 movif EECON1 00410 movif EECON1 00410 movif EECON2 00420 movif EECON2 00421 movif EECON2 00421 movif EECON2 00421 movif EECON2 00421 movif EECON2 00422 movif EECON2 00423 movif EECON2 00423 movif EECON2 00423 movif EECON2 00424 movif EECON2 00424 movif EECON2 00425 movif EECON2 00426 movif EECON2 00427 movif EECON2 00427 movif EECON2 00427 movif EECON2 00428 movif EECON2 00428 movif EECON2 00429 movif EECON2 00420 mov
<pre>00337 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check C 00403 btfss PIR1,TXIF ;check C 00404 btfss PIR1,TXIF ;check C 00407 btfss PIR1,TXIF ;check T 00408 ;rransmi return 00408 ;rransmi 00408 ;rransmi 00409 ;Write to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00413 flashWrite: Bank3 00413 flashWrite: Bank3 00415 movuf EECON1 00416 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1,WR ;enable 00419 movuf EECON1,WR ;pegin w 00420 movuf EECON1,WR ;pegin w 00421 bsf EECON1,WR ;pegin w 00422 movuf EECON1,WR ;pegin w 00423 movuf EECON1,WR ;pegin w 00423 movuf EECON1,WR ;pegin w 00425 mop 00425 mop 00425 mop 00425 mop</pre>	003397;Transmit byte in W register from USART00338;This routine returns in bank000339;This routine returns in bank000401BerialTransmit: Bank000401BerialTransmit: Bank000401BerialTransmit: Bank000402btfss00403btfss00404goto00405btfss00406s-100407powrf00408return00409return00409jwrite to a location in the flash program memory00410jAddress in EEADRH and EEADR, data in EEDATH and00410jAddress in bank300411jThis routine returns in bank300412movuf00413FlashWrite:00414movuf00415movuf00416movuf00417movuf00418movuf00419stata in EEDATH and00411jThis routine returns in bank300412movuf00413movuf00414movuf00415movuf00416movuf00417movuf00418movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf <td>00396;</td> <td>003395 ;Transmit byte in W register from USART 003397 ;Transmit byte in W register from USART 003397 ;Transmit: Banko 00401 SerialTransmit: Banko 00402 SerialTransmit: Banko 00403 btfss PIRI,TXIF ;check t 90cto \$-1 00405 btfss PIRI,TXIF ;check t 90cto \$-1 00406 return 00407 return 00407 return 00408 ;return 00408 jress in EEADRH and EEADR, data in EEDATH and 00401 ;This routine returns in bank3 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00413 FlashWrite: Bank3 00413 FlashWrite: Bank3 00414 movuk EECON1 00414 movuk EECON1 00415 movuk EECON1, WR ;enable 00416 movuk EECON1 00417 movuk EECON1, WR ;enable 00418 movuk EECON1 00419 movuk EECON1 00419 movuk EECON2 00419 movuk EECON2 00410 movuk EECON2 00411 movuk EECON2 00410 movuk EECON2 00411 movuk EECON2 00411 movuk EECON2 00411 movuk EECON2 00412 movuk EECON2 00412 movuk EECON2 00413 movuk EECON2 00413 movuk EECON2 00413 movuk EECON2 00414 movuk EECON3 00414 movuk EECON3 00414 movuk EECON3 00414 movuk EECON3 00414 movuk EECON3 00414 movuk EECON3 00414 movuk EE</td> <td>00395 ;rransmit byte in W register from USART 00398 ;rfis routine returns in bank0 00309 ;rfis routine returns in bank0 00401 SerialTransmit: Bank0 00402 SerialTransmit: Bank0 00403 SerialTransmit: Bank0 00404 btfss PIRL, TXIF ;check t 00405 btfss PIRL, TXIF ;check t 00406 s-1 00406 s-1 00406 return 00406 s-1 00407 ;rransmi 00411 ;rfhis routine returns in bank3 00412 flashWrite: Bank3 00411 ;rfhis routine returns in bank3 00412 flashWrite: Bank3 00412 movuk BECON1 00418 movuk BECON1 00418 movuk BECON1 00419 movuk BECON2 00419 movuk BECON2 00419 movuk BECON2 00419 movuk BECON2 00420 movuk BECON2 00420 movuk BECON1 00421 movuk BECON2 00420 movuk BECON2</td> <td>00395 00306 ; Transmit byte in W register from USART 00398 ; This routine returns in banko 00400 SerialTransmit: Banko 00401 btfss PILL,TKIF ; check c 00403 btfss PILL,TKIF ; check c 00404 goto \$-1 00405 return 00405 return 00406 return 00406 return 00407 ; return 00407 goto \$-1 00407 goto \$-1 00407 goto \$-1 00407 goto \$-1 00408 return 00410 ; movwf TXREG ; transmi 00410 ; movvf READRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00411 ; This routine returns in bank3 00412 goto \$-1 00412 movvf EECON1 00413 flashWrite: Bank3 00414 movvf EECON1 00415 movvf EECON1 00416 movvf EECON2 00419 movvf EECON2 00419 movvf EECON2 00419 movvf EECON2 00419 movvf EECON2 00420 movvf EECON2 00420 movvf EECON2 00421 return 00422 movvf EECON2 00423 return 00424 return 00425 movvf EECON2 00424 return 00427 ; return 00427 ; return</td> <td>00395 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00403 btfss PIRL, TXIF ; check C 00405 btfss PIRL, TXIF ; check C 00406 ; -1 00406 ; -1 00406 ; return 00407 return 00407 return in the flash program memory 00411 ; This routine returns in bank3 00411 ; This routine returns in bank3 00412 mov/w 0x84 ; enable 00418 mov/w 0x85 ; do time 00418 mov/l 0xaa 00419 mov/l 0xaa 00419 mov/l 0xaa 00419 mov/l 0xaa 00419 mov/l 0xaa 00419 mov/l 0xaa 00421 bsf ESCON2 00421 mov/l 0xaa 00421 mov/l 0xaa 00421 mov/l 0xaa 00421 mov/l 0xaa 00421 mov/l 0xaa 00421 mov/l 0xaa 00421 mov/l 0xaa 00422 mov/l 1 return 00423 ; return</td> <td>000395</td>	00396;	003395 ;Transmit byte in W register from USART 003397 ;Transmit byte in W register from USART 003397 ;Transmit: Banko 00401 SerialTransmit: Banko 00402 SerialTransmit: Banko 00403 btfss PIRI,TXIF ;check t 90cto \$-1 00405 btfss PIRI,TXIF ;check t 90cto \$-1 00406 return 00407 return 00407 return 00408 ;return 00408 jress in EEADRH and EEADR, data in EEDATH and 00401 ;This routine returns in bank3 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00413 FlashWrite: Bank3 00413 FlashWrite: Bank3 00414 movuk EECON1 00414 movuk EECON1 00415 movuk EECON1, WR ;enable 00416 movuk EECON1 00417 movuk EECON1, WR ;enable 00418 movuk EECON1 00419 movuk EECON1 00419 movuk EECON2 00419 movuk EECON2 00410 movuk EECON2 00411 movuk EECON2 00410 movuk EECON2 00411 movuk EECON2 00411 movuk EECON2 00411 movuk EECON2 00412 movuk EECON2 00412 movuk EECON2 00413 movuk EECON2 00413 movuk EECON2 00413 movuk EECON2 00414 movuk EECON3 00414 movuk EECON3 00414 movuk EECON3 00414 movuk EECON3 00414 movuk EECON3 00414 movuk EECON3 00414 movuk EE	00395 ;rransmit byte in W register from USART 00398 ;rfis routine returns in bank0 00309 ;rfis routine returns in bank0 00401 SerialTransmit: Bank0 00402 SerialTransmit: Bank0 00403 SerialTransmit: Bank0 00404 btfss PIRL, TXIF ;check t 00405 btfss PIRL, TXIF ;check t 00406 s-1 00406 s-1 00406 return 00406 s-1 00407 ;rransmi 00411 ;rfhis routine returns in bank3 00412 flashWrite: Bank3 00411 ;rfhis routine returns in bank3 00412 flashWrite: Bank3 00412 movuk BECON1 00418 movuk BECON1 00418 movuk BECON1 00419 movuk BECON2 00419 movuk BECON2 00419 movuk BECON2 00419 movuk BECON2 00420 movuk BECON2 00420 movuk BECON1 00421 movuk BECON2 00420 movuk BECON2	00395 00306 ; Transmit byte in W register from USART 00398 ; This routine returns in banko 00400 SerialTransmit: Banko 00401 btfss PILL,TKIF ; check c 00403 btfss PILL,TKIF ; check c 00404 goto \$-1 00405 return 00405 return 00406 return 00406 return 00407 ; return 00407 goto \$-1 00407 goto \$-1 00407 goto \$-1 00407 goto \$-1 00408 return 00410 ; movwf TXREG ; transmi 00410 ; movvf READRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00411 ; This routine returns in bank3 00412 goto \$-1 00412 movvf EECON1 00413 flashWrite: Bank3 00414 movvf EECON1 00415 movvf EECON1 00416 movvf EECON2 00419 movvf EECON2 00419 movvf EECON2 00419 movvf EECON2 00419 movvf EECON2 00420 movvf EECON2 00420 movvf EECON2 00421 return 00422 movvf EECON2 00423 return 00424 return 00425 movvf EECON2 00424 return 00427 ; return 00427 ; return	00395 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00403 btfss PIRL, TXIF ; check C 00405 btfss PIRL, TXIF ; check C 00406 ; -1 00406 ; -1 00406 ; return 00407 return 00407 return in the flash program memory 00411 ; This routine returns in bank3 00411 ; This routine returns in bank3 00412 mov/w 0x84 ; enable 00418 mov/w 0x85 ; do time 00418 mov/l 0xaa 00419 mov/l 0xaa 00419 mov/l 0xaa 00419 mov/l 0xaa 00419 mov/l 0xaa 00419 mov/l 0xaa 00421 bsf ESCON2 00421 mov/l 0xaa 00421 mov/l 0xaa 00421 mov/l 0xaa 00421 mov/l 0xaa 00421 mov/l 0xaa 00421 mov/l 0xaa 00421 mov/l 0xaa 00422 mov/l 1 return 00423 ; return	000395
<pre>00337 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00309 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfss PIRL,TXIF ;check C 00405 btfss PIRL,TXIF ;check c 00406 return 00407 return 00407 return 00408 ;</pre>	003397;Transmit byte in W register from USART00338;This routine returns in bank000339;This routine returns in bank000400SerialTransmit: Bank000401btfss00402btfss00403btfss00404btfss00405btfss00406s-100407btfss00407btfss00408return00409inte to a location in the flash program memory00410jddress in EEADRH and EEADR, data in EEDATH and00411jThis routine returns in bank300412movwf00413FlashWrite:00414movvf00413FlashWrite:00414movvf00415movvf00416movvf00417jrdns00418movvf00419jrdns00411jrdns00411jrdns00412bank300413bank300414movvf00415movvf00416movvf00417jrdns00418movvf00419movvf00419movvf00410jrdns00411jrdns00412jrdns00413movvf00414movvf00415movvf00415movvf00420bsf00421psf00422jord00423movvf00424psq0042	<pre>00396 ;</pre>	0033500336003387003397003397003397003399004018004018004018004019004029004039004049004059004069900407900408900409900409900409990040999 <td>00395;rransmit byte in W register from USART00396;rransmit byte in W register from USART00398;rhansmit byte in W register from USART00399serialTransmit byte in W register from USART00399SerialTransmit: Bank000400SerialTransmit: Bank000401btfsc00403btfsc00404goto00405teturn00406srl00407movwf00408return00409srl00409srl00409srl00409srl00410srl00410srl00411return00412srl00413srl00413srl00416movuf00413srl00416movuf00411returns00412srl00413srl00414movuf00415srl00416movuf00417srl00418movuf00419srl00419srl00419movuf00420srl00421srl00422srl00423srl00423srl00423srl00424srl00423srl00423srl00423srl00423srl00424srl00425srl00426srl00427srl<</td> <td>00395 7. Transmit byte in W register from USART 00398 7. Transmit byte in W register from USART 00399 Could SerialTransmit: BankO 00400 SerialTransmit: BankO 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIR1,TKIF ;check C 00405 cs.1 certurn 00406 return movve TXREG ;transmi return 00408 return frankB, data in EEDATH and 00410 ;Address in EEADRH and EADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 movve EECON1 00413 FlashWrite: Bank3 00416 movve EECON1 00419 movve EECON1, WR ; reable 00410 movve EECON1 00411 pris routine returns in bank3 00412 movve EECON1 00413 movve EECON1 00414 movve EECON1 00415 movve EECON1 00416 movve EECON1 00416 movve EECON1 00417 movve EECON1 00419 movve EECON1 00419 movve EECON1 00419 movve EECON1 00419 movve EECON1 00419 movve EECON1 00419 movve EECON1 00421 movve EECON1 00421 movve EECON1 00421 movve EECON1 00421 movve EECON1 00421 movve EECON1 00421 movve EECON1 00422 movve EECON1 00423 movve EECON1 00423 movve EECON1 00424 movve EECON1 00421 movve EECON1 0042 movve EECON1 0042 movve EECON1 0042 movve EECON2 0042 movve EECON2 0042 movve EECON2 0042 movve EECON2 0042 mo</td> <td>00395 00396 1 Transmit byte in W register from USART 00398 1 This routine returns in bank0 00400 00401 00400 00401 00405 00405 00405 00406 00406 00406 1 return 00406 00400 1 return 00400 1 return 00401 1 This routine returns in bank3 00410 1 This routine returns in bank3 00410 00411 1 This routine returns in bank3 00412 00411 1 This routine returns in bank3 00412 00411 1 This routine returns in bank3 00412 00411 00411 1 This routine returns in bank3 00412 00411</td> <td>00395 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT; check C 00403 btfss PIR1,TXIF ; check t 00406 s.1 00406 s.1 00006 s.1 0000</td>	00395;rransmit byte in W register from USART00396;rransmit byte in W register from USART00398;rhansmit byte in W register from USART00399serialTransmit byte in W register from USART00399SerialTransmit: Bank000400SerialTransmit: Bank000401btfsc00403btfsc00404goto00405teturn00406srl00407movwf00408return00409srl00409srl00409srl00409srl00410srl00410srl00411return00412srl00413srl00413srl00416movuf00413srl00416movuf00411returns00412srl00413srl00414movuf00415srl00416movuf00417srl00418movuf00419srl00419srl00419movuf00420srl00421srl00422srl00423srl00423srl00423srl00424srl00423srl00423srl00423srl00423srl00424srl00425srl00426srl00427srl<	00395 7. Transmit byte in W register from USART 00398 7. Transmit byte in W register from USART 00399 Could SerialTransmit: BankO 00400 SerialTransmit: BankO 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIR1,TKIF ;check C 00405 cs.1 certurn 00406 return movve TXREG ;transmi return 00408 return frankB, data in EEDATH and 00410 ;Address in EEADRH and EADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 movve EECON1 00413 FlashWrite: Bank3 00416 movve EECON1 00419 movve EECON1, WR ; reable 00410 movve EECON1 00411 pris routine returns in bank3 00412 movve EECON1 00413 movve EECON1 00414 movve EECON1 00415 movve EECON1 00416 movve EECON1 00416 movve EECON1 00417 movve EECON1 00419 movve EECON1 00419 movve EECON1 00419 movve EECON1 00419 movve EECON1 00419 movve EECON1 00419 movve EECON1 00421 movve EECON1 00421 movve EECON1 00421 movve EECON1 00421 movve EECON1 00421 movve EECON1 00421 movve EECON1 00422 movve EECON1 00423 movve EECON1 00423 movve EECON1 00424 movve EECON1 00421 movve EECON1 0042 movve EECON1 0042 movve EECON1 0042 movve EECON2 0042 movve EECON2 0042 movve EECON2 0042 movve EECON2 0042 mo	00395 00396 1 Transmit byte in W register from USART 00398 1 This routine returns in bank0 00400 00401 00400 00401 00405 00405 00405 00406 00406 00406 1 return 00406 00400 1 return 00400 1 return 00401 1 This routine returns in bank3 00410 1 This routine returns in bank3 00410 00411 1 This routine returns in bank3 00412 00411 1 This routine returns in bank3 00412 00411 1 This routine returns in bank3 00412 00411 00411 1 This routine returns in bank3 00412 00411	00395 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT; check C 00403 btfss PIR1,TXIF ; check t 00406 s.1 00406 s.1 00006 s.1 0000
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIRI,TXIF ;check C 00403 btfss PIRI,TXIF ;check C 00406 \$-1 ;check C 00406 \$-1 ;check C 00406 \$-1 ;transmi 00406 return ad 00409 ;Write to a location in the flash program memory 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00415 00415 movuf EECON1 00415 00415 00415 00416 00416 00416 00416 ;enable 00416 movuf EECON1 00416 00415 00417 0x55 ;change 00417 movuf EECON1 00416 00418 movuf EECON1 00416 00415 00416 movuf EECON1 00417 0x43 00421 bsf EECON1,WR ;begin w 00420 00421 0x43 00420 00421 0x43 00426 00420 0x420	003397;Transmit byte in W register from USART00338;This routine returns in bank000339;This routine returns in bank000400SerialTransmit: Bank000401btfssPRTL,TTFF00402goto\$-100403btfssPRLL,TTFF00404poto\$-100405movwfTXREG00406return;transmi00407return;transmi00408statneovvf00409;Write to a location in the flash program memory00410;Address in EEADRH and EEADR, data in EEDATH and00411;This routine returns in bank3;change00412novvfBank3;change00413FlashWrite:Bank3;change00416movvfBECON1;change00417movvfBECON2;data in EEDATH and00418returns in bank3;change00419movvfBank3;change00410movvfBECON1;change00411povto\$-1;transmi00412movvfBank3;change00413fourite:povto;transmi00414movvfBECON10:041800415movvfBECON2;do time00416movvfBank3;do time00417movvfBECON10:042800420movvfBECON10:042800421boto\$-1;do time00422movvfBEC	<pre>00396 ; :</pre>	003390033900339013980139801398013980139801398013980139801398014000140101401014020140301403014040140401405014050140601407014080140801409014090140901410014100141001411 <td>00395;00396;00397;00398;00398;00399;00399;00399;00399;00399;00399;00399;00399;00400SerialTransmit00401btfscpoto\$-100402poto01403btfsc00404poto100405return00406return00407return00408return00407return00407return00408return00409in EBADRH and00401;Mrite to a location in the flash program memory00411;This routine returns in bank300412movuf EBADR, data in EEDATH and00413FlashWrite:00414movuf EBCON100415movuf EBCON100416movuf EBCON100417movuf EBCON100418movuf EBCON1004190041900419movuf EBCON1004190041900419movuf EBCON1004190041900419movuf EBCON10041900419004190041900419movuf EBCON10041900419004190041900419movuf EBCON1004200042000421movuf EBCON10042200420<t< td=""><td>00395003960033077Transmit byte in W register from USART0033970033987This routine returns in bank00040000401004010040200403004030040400404004040040500405004060040600407004070040800409%Trite to a location in the flash program memory00411%This routine returns in bank30041200413%This routine returns in bank3004140041500411%This routine returns in bank30041200413%This routine returns in bank30041400415004150041600411%This routine returns in bank30041200413%This routine returns in bank300415%This routine returns in bank30041600417%This routine returns in bank300418%This routine returns in bank300419%This routine returns in 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00397Transmit byte in W register from USART003987This routine returns in bank000309SerialTransmit: Bank000400SerialTransmit: Bank000401btfss PIRL,TXIF00402goto \$-100403btfss PIRL,TXIF00404serial00405btfss PIRL,TXIF00405stal00406stal00407return00408stal00409freek to00409freek to00409freek to00410freek to00410freek to00411freek to00412freek to00413freek to00414movuf00412freek00413freek00414movuf00415movuf00416movuf00417freek00418movuf00419freek00411freek00412freek00413freek00414movuf00415movuf00415movuf00416movuf00417movuf00421bff00421movuf00422movuf00423movuf00423movuf00423movuf00423movuf00423movuf00423movuf00423movuf00423movuf00424movuf00425movuf <td< td=""><td><pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in banko 00398 ;This routine returns in banko 00401 SerialTransmit: Banko 00402 SerialTransmit: Banko 00403 btfss PIRI,TXIF ;check t 9000 \$-1 00406 *-1 00406 *-1 00406 *-1 00409 ;mrite to a location in the flash program memory 00410 ;Mrite to a location in the flash program memory 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00412 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00414 movuf EECON1 00415 00417 00418 movuf EECON1 00417 00418 movuf EECON1 00419 00418 movuf EECON1 00419 00419 movuf EECON1 00420 movuf EECON1 00421 00411 movuf EECON1 00421 00411 movuf EECON1 00420 00421 movuf EECON1 00420 00421 movuf EECON1 00421 00411 movuf EECON1 00421 00411 movuf EECON1 00421 00411 movuf EECON1 00420 movuf EECON1 00420 movuf EECON1 00421 movuf EECON1 00421 movuf EECON1 00421 movuf EECON1 00420 movuf EECON1 00421 movuf EECON1 00420 movuf EECON2 00420 movuf EECON2 00</pre></td><td><pre>00396 ;</pre></td><td>003390033900339013970139801398013980139901399013990139901400014010140101402014030140401404014050140501406014060140701407014080140901409014010140101403014040140401405014070140701408014190141001411014110141301413014130141401414014150141501416014170141801419014200142101421<</td><td>00395;00396;00397;00398;00399;00399;00399;00399;00399;00399;00400SerialTransmit byte in W register from USART00399SerialTransmit: Banko00401SerialTransmit: Banko00402spin00403btfss00403spin00404btfss00405s-100406str00407return00407return00408return00407return00408intreBADRH and EEADRH and EEADR00411intis routine returns in bank300412movuf00413flashMrite: Bank300416movuf00416movuf00417movuf00418movuf00419intis routine returns in bank300419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00420movuf00421bsf00422movuf00423movuf<td>003950039600397003977Transmit byte in W register from 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in W register from USART 00398 ;This routine returns in banko 00398 ;This routine returns in banko 00401 SerialTransmit: Banko 00402 SerialTransmit: Banko 00403 btfss PIRI,TXIF ;check t 9000 \$-1 00406 *-1 00406 *-1 00406 *-1 00409 ;mrite to a location in the flash program memory 00410 ;Mrite to a location in the flash program memory 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00412 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00414 movuf EECON1 00415 00417 00418 movuf EECON1 00417 00418 movuf EECON1 00419 00418 movuf EECON1 00419 00419 movuf EECON1 00420 movuf EECON1 00421 00411 movuf EECON1 00421 00411 movuf EECON1 00420 00421 movuf EECON1 00420 00421 movuf EECON1 00421 00411 movuf EECON1 00421 00411 movuf EECON1 00421 00411 movuf EECON1 00420 movuf EECON1 00420 movuf EECON1 00421 movuf EECON1 00421 movuf EECON1 00421 movuf EECON1 00420 movuf EECON1 00421 movuf EECON1 00420 movuf EECON2 00420 movuf EECON2 00</pre>	<pre>00396 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W register from USART0039800400003990040100401004020040300404004040040400404004040040500406004070040700406004070041817his routine returns in bank30041900411004120041300413004130041900419004190041900419004190041900419004190041900419004190041900419004190041900419004200041900420004190042000420004200042000420004200042000420004200042000420<	00395;Transmit byte in W register from USART00396;Transmit byte in W register from USART00399srialTransmit: Bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT;check C00403goto \$-100404goto \$-100405btffsc PORTB,CTS_INPUT;check C00407goto \$-100407poto \$-100407return00407return00407scoto \$-100407scoto \$-100418movufn ERADR, data in EBDATH and00413scoto \$-100413movufn Bank300419movufn Ox5500419movufn Ox5500419movufn Ox55004200041900421bsf00422scoto \$-100413movufn Ox5500414movufn Ox5500415scoto \$-100416movufn Ox5500417scoto \$-100420bsf00421bsf00422scoto \$-100423scoto \$-1 <trr<td>00424<td>00395</td></trr<td>	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00309 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PTR1,TXIF ;check t 00405 c 5-1 00406 return goto 5-1 00406 return 00406 return 00406 ;%transmi return 00409 ;Write to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00412 00412 movuf EECON1 00415 00414 movuf EECON1 00415 00416 movuf EECON1 00415 00416 movuf EECON1 00416 00417 movuf EECON1 00416 00418 movuf EECON1 00419 00416 movuf EECON1 00419 00416 movuf EECON1 00419 00416 movuf EECON1 00419 00416 movuf EECON1 00419 00419 00418 movuf EECON1 00419 00420 00420 ;psf EECON1,WR ;begin w 00420 0	<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00398 ;This routine returns in bank0 00401 SerialTransmit: Bank0 00402 SerialTransmit: Bank0 00403 btfss PIRL,TXIF ;check t 9000 \$-1 movwf TXREG ;transmi return 00406 return in the flash program memory 00400 ;Mrite to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 FlashWrite: Bank3 00413 FlashWrite: Bank3 00414 movuf EECON1 00415 movuf EECON1 00416 movuf EECON1 00415 movuf EECON1 00416 movuf EECON2 00419 movuf EECON1 00420 movuf EECON1 00421 movuf EECON1 00421 movuf EECON1 00421 movuf EECON2 00420 movuf EECON2 00421 movuf EECON2 00420 movuf EECON2 00420 movuf EECON1 00421 movuf EECON1 00421 movuf EECON2 00422 movuf EECON2 00423 movuf EECON2 00424 movuf EECON2 00426 movuf EECON2 00427 movuf EECON2 00426 movuf EECON2 00427 movuf EECON2 00428 movuf EECON3 00428 movuf EECON3 00418 movuf EECON3 00418 movuf EECON3 00418 movuf EECON3 00418 movuf EECON3 004</pre>	00396 ;	00395 00398 ;This routine returns in bank0 00398 ;This routine returns in bank0 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check t 00402 btfsc PORTB,CTS_INPUT ;check t 00403 btfsc PIR1,TXIF ;check t 00405 return 00406 return 00406 return 00406 return 00407 return 00408 ;rransmi 00408 ;rransmi 00408 return 00409 ;Mrite to a location in the flash program memory 00411 ;This routine returns in bank3 00412 00413 FlashMrite: Bank3 00415 movur EECON1 00416 movur EECON1 00416 movur EECON2 00419 movur EECON2 00410 return 00410 return 00410 return 00410 movur EECON2 00410 movur EECON2 00420 movur EECON2 00400	0039500396013960139701397013990139901399013990139901399013990139901399013990140001401014020140301403014040140401405014050140601406014070140701408014070140901407014090140701409014090141011121213141415141415151616171818 <t< td=""><td>0039500396003977003977003987003997003999004000040100401004020040300403004040040400404004050040600407004070040700408004070040970040970040970041070041171717181919111<</td><td>00395;Transmit byte in W register from USART00396;Transmit byte in W register from USART00399;This routine returns in bank000399serialTransmit: Bank000400serialTransmit: Bank000401serialTransmit: Bank000402goto00403btffss00404goto00405still00406still00407poto00407return00407still00407still00407still00407stell00407still00407stell00408stell00409stell00410stell00411stell7stell00412stell00413stell00413stell00414movlw00413stell00414movlw00413stell00414outline seturns00413stell00414movlw00413stell00414movlw00413stell00414movlw00414stell00415stell00416movlw00417stell00418movlw00419stell00419stell00411stell00412stell00413stell00414stell00416stell00417stell<</td><td>00395</td></t<>	0039500396003977003977003987003997003999004000040100401004020040300403004040040400404004050040600407004070040700408004070040970040970040970041070041171717181919111<	00395;Transmit byte in W register from USART00396;Transmit byte in W register from USART00399;This routine returns in bank000399serialTransmit: Bank000400serialTransmit: Bank000401serialTransmit: Bank000402goto00403btffss00404goto00405still00406still00407poto00407return00407still00407still00407still00407stell00407still00407stell00408stell00409stell00410stell00411stell7stell00412stell00413stell00413stell00414movlw00413stell00414movlw00413stell00414outline seturns00413stell00414movlw00413stell00414movlw00413stell00414movlw00414stell00415stell00416movlw00417stell00418movlw00419stell00419stell00411stell00412stell00413stell00414stell00416stell00417stell<	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00401 btfsc PORTB,TSTF 00403 btfss PTR1,TXIF 00406 \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00400 \$-1 00410 \$	00337;Transmit byte in W register from USART00338;This routine returns in bank000400SerialTransmit: Bank000401Betfsc PORTB,CTS_INPUT00402Betfsc PORTB,CTS_INPUT00403Betfsc PORTB,CTS_INPUT00404S-100405Betfsc PORTB,CTS_INPUT00406S-100407Betfsc PORTB,CTS_INPUT00407S-100407SerialTransmit: Bank000407SerialTransmit: Bank100407SerialTransmit: Bank300408Series in EEADRH and EEADR, data in EEI00410Address in EEADRH and EEADR, data in EEI00411This routine returns in bank300412Movuwf EECON100413FlashWrite: Bank300416movuw EECON100413Movuwf EECON100414Movuwf EECON200415Movuwf EECON200416Movuwf EECON200417Movuwf EECON200418Movuwf EECON200419Movuwf EECON100420Movuwf EECON200421Dog00422Movuwf EECON100423Nop00424Nop00425Movuwf EECON100426Set00427Nop00427Nop00428Nop00429Set00429Nop00429Nop00429Nop00429Nop00429Nop00429Nop00429Nop<	00396 ;	00396 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT 00403 btfss PTR1, TXIF 00405 movwf 7XREG 00406 *1 00406 return 00406 return 00406 return and EEADR, data in EE 00410 ; Address in EEADRH and EEADR, data in EE 00411 ; This routine returns in bank3 00413 FlashWrite: Bank3 00416 movlw 0X55 00416 movlw 0X55 00419 movlw 0X55 00410 movlw 0X55 00411 movlw 0X55 0041	00395 7.Transmit byte in W register from USART 00398 7.Transmit byte in W register from USART 00399 00400 00401 00402 00402 00403 00405 00405 00406 00406 00406 00406 00406 00406 00406 00407 00406 00407 00406 00400 00400 00400 00410 1.This routine returns in bank3 00411 1.This routine returns in bank3 00412 00413 00414 1.This routine returns in bank3 00414 00416 00411 1.This routine returns in bank3 00411 00411 00412 00412 00411 00416 00411 00416 00411 00411 00411 00411 00411 00411 00411 00411 00412 00412 00411 00411 00412 00413 00411 00411 00411 00412 00413 00413 00413 00413 00414 00415 00413 00416 00411 00416 00411 00411 00411 00411 00412 00413 00412 00413 00413 00413 00413 00413 00414 00416 00416 00416 00417 00417 00418 00418 00418 00419 00418 00419 000419 00419 00419 000419 000100 0000000	00395 7.Transmit byte in W register from USART 00396 7.Transmit byte in W register from USART 00309 00401 00401 00401 00401 00402 00402 00405 00405 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00407 00406 00406 00406 00406 00406 00406 00410 00410 00411 7.This routine returns in bank3 00412 00412 00412 00412 00412 00412 00416 00416 00416 00416 00416 00416 00417 00416 00417 00418 00418 00416 00416 00416 00416 00416 00417 00416 00416 00417 00416 00417 00417 00418 00418 00418 00418 00418 00418 00418 00418 00419 00418 000418 000418 00018 00008 00008 00008 0008 000	00395 7.Transmit byte in W register from USART 00397 7.Transmit byte in W register from USART 00309 00400 00401 00401 00401 00402 00402 00405 00405 00405 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00407 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00410 1.This routine returns in bank3 00411 7.This routine returns in bank3 00412 00412 00412 00412 00416 00416 00416 00418 00418 00416 00416 00416 00418 00416 00418 00418 00416 00418 00418 00416 00416 00416 00417 00418 000418 00418 00418 00418 00418 00418 00418	00397 ;Transmit byte in W register from USART 00397 ;Transmit byte in W register from USART 00399 ;Transmit byte in W register from USART 00399 ;Transmit byte in W register from USART 00399 ;Transmit byte in W register from USART 00390 stalTransmit Bank0 00401 btfsc 00402 btfsc 00403 stalTransmit: Bank0 00404 goto 00405 stalTransmit: Bank3 00406 stal 00407 goto 00408 stal 00409 stal 00401 staltif 00410 staltif 00411 staltif 00411 staltif 00412 staltif 00413 movufw 00414 movufw 00415 movufw 00416 movufw 00417 movufw 00418 movufw 00419 movufw 00412 movufw 00412 movufw 00412
<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00309 SerialTransmit Bank0 00400 SerialTransmit: Bank0 00401 btfss PIR1,TXIF 00403 goto \$-1 00406 return 00406 return 00406 return 00407 return 00407 return 00409 ;Write to a location in the flash progra 00410 ;Address in EEADRH and EEADR, data in EE 00411 ;This routine returns in bank3 00412 movuf EECON1 00412 movuf EECON1 00414 movuf EECON1 00415 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00417 00416 movuf EECON1 00418 movuf EECON1 00418 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1 00410 movuf EECON1 00420 movuf EECON1,WR 00421 movuf EECON1,WR 00421 movuf EECON1,WR 00421 movuf EECON1,WR 00421 movuf EECON1,WR 00421 movuf EECON1,WR 00422 movuf EECON1,WR 00423 mop 00423 mop</pre>	00337;Transmit byte in W register from USART00338;This routine returns in bank000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT00402SerialTransmit: Bank000403btfss<pre>prkl,TXIF00404btfss<pre>prkl,TXIF00405btfss<pre>prkl,TXIF00406s-100406seturn00407seturn00408return00409seturn00410seturn00411fthis routine return00412movuf movuf00413flashWrite:00414movuk movuk00411fthis routine returns in bank300412movuk movuk00413flashWrite:00414movuk movuk00415movuk movuk00416movuk movuk00417movuk movuk01418movuk movuk00413flashWrite:00413movuk movuk00414ox5500415movuk movuk00416movuk movuk00412movuk movuk00422movuk movuk00423nop00423nop00423nop004244nop00425nop</pre></pre></pre></pre>	00396 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfss PDRTB,CTS_INPUT 00401 btfss PIR1,TXIF 00403 still ransmit: Bank0 00406 \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00407 \$	00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00403 btfss PIRL,TXIF 00405 teturn 00406 serialTransmit: Bank0 00406 serialTransmit: Bank3 00406 serialTransmit: Bank3 00410 serialTransmit: Bank3 00410 serialTransmit: Bank3 00411 prhis routine returns in bank3 00412 movuk BEADRH and EEADR1 00413 FlashWrite: Bank3 00414 movuk BERON1 00415 movuk BERON1 00415 movuk BERON1 00416 movuk BERON1 00415 movuk BERON1 00416 movuk BERON1 00417 movuk BERON1 00418 movuk BERON1 00419 movuk BERON1 00419 movuk BERON1 00419 movuk BERON1 00410 movuk BERON1 00410 movuk BERON1 00410 movuk BERON1 00410 movuk BERON1 00411 pris routine returns in bank3 00413 movuk BERON1 00414 movuk BERON1 00415 movuk BERON1 00415 movuk BERON1 00415 movuk BERON1 00416 movuk BERON1 00416 movuk BERON1 00416 movuk BERON1 00417 movuk BERON1 00418 movuk BERON1 00418 movuk BERON1 00419 movuk BERON1 00410 movuk BERON1 00410 movuk BERON1 00410 movuk BERON1 00410 movuk BERON1 00410 movuk BERON1 00411 movuk BERON1 00410 movuk BERON1 00411 movuk BERON1 00410 movuk BERON1 00411 movuk BERON1	00395 7 Transmit byte in W register from USART 00398 7 This routine returns in bank0 00308 00400 00401 00402 00403 00405 00405 00406 00406 00406 00406 00406 00406 00406 00406 00406 00407 00408 00408 00408 00408 00408 00408 00408 00408 00408 00408 00408 00408 00408 00408 00408 00410 00408 00410 00410 00411 7 This routine returns in bank3 00413 00413 00414 00416 00416 00416 00416 00417 00418 00418 00418 00418 00418 00418 00418 00419 00419 00419 00419 00419 00419 00419 00410 00410 00410 00410 00410 00410 00410 00411 00410 00411 00412 00411 00412 00413 00410 00413 00410 00413 00410 00410 00413 00410 00410 00410 00410 00410 00411 00410 000410 000000 00410 000000 0000000 0000000 0000000 0000	00395 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00403 SerialTransmit: Bank0 00404 \$ "1" 00405 btfss PTR1,TXIF 00406 \$ "1" 00406 \$ "1" 00406 \$ "1" 00407 \$ "1" 00407 \$ "1" 00407 \$ "1" 00407 \$ "1" 00408 \$ "1" 00408 \$ "1" 00410 \$ Mrite to a location in the flash program 00411 \$ This routine returns in bank3 00413 \$ lashWrite: Bank3 00414 movuf EECON1 00419 \$ "00416 \$ "00418 \$ "00418 \$ "00418 \$ "00418 \$ "00418 \$ "000423 \$ "00423 \$ "000423 \$ "000423 \$ "00423 \$ "000423 \$ "00423 \$ "000423 \$ "00423 \$ "000423 \$ "000423 \$ "000423 \$ "00423 \$ "000423	00395 ;:rransmit byte in W register from USART 00396 ;Transmit byte in W register from USART 00399 ;Transmit byte in W register from USART 00399 ;Transmit byte in W register from USART 00399 ;Transmit byte in W register from USART 00401 SerialTransmit: Banko 00401 btfss PIRL, TXIF 00402 goto \$-1 00403 goto \$-1 00404 goto \$-1 00405 btfss PIRL, TXIF 00406 strut 00407 goto \$-1 00408 movwf TXREG 00410 ptite to a location in the flash progra 00411 rthis routine returns in bank3 00411 rthis routine returns in bank3 00411 movlw 0x84 00411 movlw 0x84 00411 movlw 0x84 00412 movlw 0x84 00413 movlw 0x84 00414 movlw 0x84 00415 movlw 0x84 00416 movlw 0x84 00417 movlw 0x84 00418 movlw 0x84 00419 </td <td>00395 ;************************************</td>	00395 ;************************************
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfss PIR1,TXIF 00401 btfss PIR1,TXIF 00405 cold 5:1 00406 return 00406 return 00407 return 00407 return 00409 ;Write to a location in the flash progra 00410 ;Address in EEADRH and EEADR, data in EE 00411 ;This routine returns in bank3 00412 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00413 movur EECON1 00416 movur EECON1 00419 00416 movur EECON1 00410 movur EECON1 00412 00413 movur EECON1 00415 00413 movur EECON1 00415 00416 movur EECON1 00416 movur EECON1 00416 movur EECON1 00419 movur EECON1 00420 00421 movur EECON1,WR	00337;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT00402goto \$-100403btfss PIR1,TXIF00404serialtransmit< Bank0	00396 ; This routine returns in bank0 00399 ; This routine returns in bank0 00309 SetialTransmit byte in W register from USART 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT 00403 btfsc PIR1, TXIF 00406 \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00407 \$	00396 ; Transmit byte in W register from USART 00398 ; This routine returns in banko 00399 SerialTransmit: Banko 00401 SerialTransmit: Banko 00402 D0403 btfss PIRL, TXIF 00405 btfss PIRL, TXIF 00406 \$-1 00406 \$-1 00406 \$-1 00406 return 00406 \$-1 00406 return 00407 ptfss pircles 00410 ptfss in EEADRH and EEADR, data in EE 00411 ; This routine returns in bank3 00413 FlashWrite: Bank3 00416 moviw 0x84 00418 moviw 0x84 00419 00418 moviw 0x84 00419 00410 moviw 0x84 00410 0x416 moviw 0x84 00411 ptils routine returns in bank3 00410 moviw 0x84 00411 pris routine returns in bank3 00411 pris routine returns in bank3 00411 point EECON1 00415 moviw 0x84 00416 moviw 0x84 00418 moviw 0x84 00419 moviw 0x84 00420 moviw 0x84	00395 7 Transmit byte in W register from USART 00398 7 Transmit byte in W register from USART 00399 00400 00401 00401 00402 00403 00404 00405 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00407 00406 00407 00407 00408 00408 00410 00410 00411 7 This routine returns in bank3 00411 00411 00412 00412 00413 00416 00411 00416 00416 00416 00417 00418 00018 00416 00418 00018 00416 00416 00417 00416 00417 00418 00418 00418 00418 00418 00418 00418 00418 00418 00419 00419 00416 00416 00416 00417 00416 00417 00418 000418 000418 00418 00418 000418 000418 00018	00395 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00401 btfsc PORTB,CTS_INPUT 00403 stialTransmit: Bank0 00406 \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00406 \$-1 00407 goto \$-1 00407 \$-1 00406 \$-1 00407 \$-1 00406 \$-1 00408 \$-1 00408 \$-1 00410 \$-1 00410 \$-1 00410 \$-1 00411 \$This routine returns in bank3 00411 \$This routine returns in bank3 00412 movWf EECON1 00415 00416 movUw 0x84 00416 00416 movUw 0x855 00417 00416 movUw 0x55 00418 movWf EECON1,WR 00420 00420 00420 00420 00421 movWf EECON1,WR 00423 00420 00420 00420 00420 movWf EECON1,WR 00423 00423 00420	00395 ;	00395 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 btfss PIR1,TXIF 00405 5-1 00406 5-1 00406 7-1 00406 return 00407 7-1 00406 return 00407 7-1 00408 7-1 00408 7-1 00409 7 7 1 fhis routine returns in bank3 00411 7 7 fis routine returns in bank3 00412 00412 movlw EECON1 00412 00413 flashWrite: Bank3 00413 flashWrite: Bank3 00414 movlw EECON1 00412 00414 movlw EECON1 00412 00413 movlw EECON1 00413 movlw EECON1 00414 movlw 0x84 00414 movlw 0x85 00415 00413 movlw 0x84 00415 00416 movlw 0x84 00416 movlw 0x84 00416 movlw 0x84 00418 movlw 0x84 00418 movlw 0x85 00419 movlw 0x85 00420 movlw 0x84 00420 movlw 0x84 00421 movlw 0x85 00421 movlw 0x84 00422 movlw 0x84 00423 movlw 0x85 00424 movlw 0x85 00424 movlw 0x84 00424 movlw 0x85 00424 movlw 0x85 00424 movlw 0x84 00424 movlw 0x85 00424 movlw 0x85 00424 movlw 0x84 00424 movlw 0x84 00424 movlw 0x85 00424 movlw 0x85 00424 movlw 0x84 00424 movlw 0x85 00424 movlw 0x85 00424 movlw 0x85 00424 movlw 0x84 00428 movlw 0x84 00428 movlw 0x84 00428 movlw 0x84 00428 movlw 0x84 00428 movlw 0x84 00428 movlw 0x84 00418 movlw 0x84	00337;Transmit byte in W register from USART00338;This routine returns in bank000398;This routine returns in bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT00402goto \$-100403btfss PIR1,TXIF00404btfss PIR1,TXIF00405btfss PIR1,TXIF00406seto \$-100407btfss PIR1,TXIF00407return00407return00409;Write to a location in the flash progra00410;Address in EEADRH and EEADR, data in EE00411;This routine returns in bank300412movuf 0x8400413FlashWrite: Bank300414movuf EECON100415movuf EECON100416movuf EECON100417movuf EECON100418movuf EECON100419bsf EECON200412movuf EECON100413bsf EECON100414movuf EECON100415movuf EECON100416movuf EECON100417movuf EECON100418movuf EECON1004200041200421bsf EECON1, WR004220042300423movuf EECON1, WR004240042300423bsf EECON1, WR004240042400424pop004250042300426psf Psf Psh Psf Psh Psf	00396 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00403 serialTransmit: Bank0 00404 \$.1 Dtfsc PORTB,CTS_INPUT 00405 \$.1 Dtfsc PORTB,CTS_INPUT 00406 \$.1 Dtfsc PORTB,CTS_INPUT 00406 \$.1 Dtfsc PORTB,CTS_INPUT 00406 \$.1 Dtfsc PORTB,CTS_INPUT 00407 \$.1 Dtfsc PORTB,CTS_INPUT 00408 \$.1 Dtfsc PORTB,TREG 00410 \$ Mrite to a location in the flash progra 00411 \$ This routine returns in bank3 00411 \$ This routine returns in bank3 00415 \$ Dtfsc PORTB, data in EE 00411 \$ This routine returns in bank3 00415 \$ Dtfsc PORTB, data in EE 00416 \$ movWf EECON1 00417 \$ Dtfsc PORTB,	00396 ; Transmit byte in W register from USART 00398 ; This routine returns in banko 00399 SerialTransmit: Banko 00401 SerialTransmit: Banko 00402 SerialTransmit: Banko 00403 btfss PIRL, TXIF 00403 btfss PIRL, TXIF 00405 stal btfss PIRL, TXIF 00405 stal btfss PIRL, TXIF 00406 stal btfss PIRL, TXIF 00406 return 00410 ptfss in EEADRH and EEADR, data in EEI 00411 ; This routine returns in bank3 00413 FlashWrite: Bank3 00415 movuf EECON1 00416 movlw 0x84 00415 00416 movlw 0x84 00416 00416 movlw 0x84 00417 movuf EECON1 00418 movuf EECON1 00419 movuf EECON1 00420 movuf EECON1, WR 00421 ptfs movuf EECON1, WR	00395 7 Transmit byte in W register from USART 00398 7 Transmit byte in W register from USART 00309 00400 00401 00401 00402 00403 00404 00405 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00407 00407 00408 00406 00410 00410 00411 000411 00411 00411 000411 000011 000010 000010 0000000000	00395 00396 00397 00398 00398 00400 00400 00401 00400 00401 00400 00400 00400 00400 00400 00405 00406 00410 00410 00410 00411 000411 000411 000110 000110 000110 000110 00000000	00395 ;	00395 ;*Transmit byte in W register from USART 00396 ;Transmit byte in W register from USART 00399 ;Transmit byte in W register from USART 00399 ;Transmit byte in W register from USART 00399 ;Transmit byte in W register from USART 00390 SerialTransmit: Bank0 00401 btffsc PORTB,CTS_INPUT 00402 SerialTransmit: Bank0 00403 \$00403 \$9040 004040 spit TXREG 00405 \$9040 \$-1 00406 \$9040 \$-1 00407 movwf TXREG 00408 \$-11 movvf 00409 \$movvf BASADR, data in EB 00410 \$Mrite to a location in the flash program 00411 \$This routine returns in bank3 00411 \$This routine returns in bank3 00412 \$00411 \$00415 00411 \$TMV \$00416 00411 \$00416 \$00416 00412 \$00411 \$00416 00412 \$00411 \$00411 00412
00397;Transmit byte in W register from USART00398;This routine returns in bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto00403still Transmit: Bank000404poto00405btfss PIR1,TXIF00406s-100407couvef00407soto00407soto00407soto00408stransmi00407soto00407stransmi00407soto00408stransmi00409stransmi00407stransmi00407stransmi00408stransmi00410stransmi00411stransmi00412stransmi00413stransmi00414movuf00413stransmi00414movuf00413stransmi00414movuf00415movuf00416movuf00417movuf00418movuf00419movuf00419movuf00420stransmi00421movuf00421movuf00422movuf00423movuf00423movuf00423movuf00423movuf00423movuf00423movuf00423movuf00423movuf00423movuf00423movuf<	<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00398 ;This routine returns in bank0 00401 SerialTransmit: Bank0 00402 SerialTransmit: Bank0 00405 btfss PIRL,TXIF ;check t 00405 \$-1 00406 \$-1 00406 \$-1 00406 *1 00406 *1 00407 return 00407 return 00407 return 00410 ;Mrite to a location in the flash program memory 00410 ;Mrite to a location in the flash program memory 00411 ;This routine returns in bank3 00412 00411 ;This routine returns in bank3 00412 00411 ;This routine returns in bank3 00412 00411 FlashWrite: Bank3 00412 00411 FlashWrite: Bank3 00412 00411 returns in bank3 00412 00411 returns in bank3 00412 00412 movuf EECON1 00412 movuf EECON1 00412 00413 flashWrite bank3 00413 flashWrite Bank3 00412 movuf EECON1 00413 flashWrite bank3 00413 flashWrite Bank3 00410 flashWrite</pre>	00396 ; Transmit byte in W register from USART 00399 ; Transmit byte in W register from USART 00309 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfss PIR1, TXIF ; check C 00405 btfss PIR1, TXIF ; check t 00406 \$-1 00406 return 00406 \$-1 00407 ; charge 00407 return 00409 ; write to a location in the flash program memory 00410 ; Mrite to a location in the flash program memory 00411 ; This routine returns in bank3 00412 PlashWrite: Bank3 00412 00413 FlashWrite: Bank3 00413 FlashWrite: Bank3 00411 movuf EECON1 00416 movuf EECON1 00415 movuf EECON1 00415 movuf EECON1 00416 movuf EECON1 00417 movuf EECON1 00420 00420 bsf EECON1, WR ; begin w 00420 00423 nop	00395;remain byte in W register from USART00398;This routine returns in bank000399;ransmit byte in W register from USART00399SerialTransmit byte in W register from USART00399SerialTransmit bank000402goto04403btffsc PORTB, CTS_INPUT ;check c0404goto0405s-10406s-10407return0408s-10409stal0407s-10408s-10410movwf TXREG0410stal0411return0412stal0413return0410stal0411movuf EEADRH and EEADR, data in EEDATH and0411return0411movuf EECON10412movuf EECON10413flashWrite: Bank30413movuf EECON10416movuf EECON10417movuf EECON10418movuf EECON10419movuf EECON10412bsf0421bsf0422ota0423bsf0423nop0423nop0423nop0424nop0423nop0423nop0424nop0423nop0424nop	003950039670039770039870039870039870039870039870039870039900400800401900402004039004039004049004049004059004079004079004079004079900407990040799 <trr< td=""><td>00395 7 This routine returns in banko 00308 7 Transmit byte in W register from USART 00309 00401 00401 00402 00403 00403 00405 00405 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00407 00407 00407 00410 17 fis routine returns in bank3 00410 17 fis routine returns in bank3 00411 7 fis routine returns in bank3 00412 00412 00412 00413 00416 00413 00416 00416 00416 00416 00416 00416 00417 00416 00417 00416 00418 00418 00418 00418 00418 00418 00418 00418 00418 00418 00418 00419 00418 00419 00419 00419 00419 00419 00410 00419 00410 00400 000000 00000 00000 00000 000</td><td>00395;Transmit byte in W register from USART00396;Transmit byte in W register from USART00398;This routine returns in bank000399SerialTransmit Bank000400SerialTransmit Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btffsc PORTB,CTS_INPUT ;check C00404goto \$-100405btffsc PORTB,CTS_INPUT ;check C00406stil00407poto \$-100408return00409;Write to a location in the flash program memory00410;Mrite to a location in the flash program memory00411;This routine returns in bank300412could BEADRH and EEADR, data in EEDATH and00413FlashWrite: Bank300414movurf EECON100415movurf EECON100416movurf EECON200413poto00413movurf EECON200413movurf EECON100413movurf EECON200413movurf EECON100413movurf EECON200413movurf EECON100413movurf EECON200413movurf EECON200423movurf EECON200423</td><td>00395:Transmit byte in W register from USART00396;This routine returns in bank000398;This routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401btffsc PORTB,CTS_INPUT;check C00402goto \$-100403htffss PIR1,TXIF00404ycouvé00405return00406return00407movvé00407yrite to a location in the flash program memory00408yrite to a location in the flash program memory00410jMrite in bank300411jThis routine returns in bank300412movué00413FlashWrite:00413pové00413movué00414movué00413movué00423movué00423</td></trr<>	00395 7 This routine returns in banko 00308 7 Transmit byte in W 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memory00411;This routine returns in bank300412could BEADRH and EEADR, data in EEDATH and00413FlashWrite: Bank300414movurf EECON100415movurf EECON100416movurf EECON200413poto00413movurf EECON200413movurf EECON100413movurf EECON200413movurf EECON100413movurf EECON200413movurf EECON100413movurf EECON200413movurf EECON200423movurf EECON200423	00395:Transmit byte in W register from USART00396;This routine returns in bank000398;This routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401btffsc PORTB,CTS_INPUT;check C00402goto \$-100403htffss PIR1,TXIF00404ycouvé00405return00406return00407movvé00407yrite to a location in the flash program memory00408yrite to a location in the flash program memory00410jMrite in bank300411jThis routine returns in bank300412movué00413FlashWrite:00413pové00413movué00414movué00413movué00423movué00423
<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00402 btfss PIR1,TXIF 00403 btfss PIR1,TXIF 00406 return 00406 return 00406 return 00407 return 00400 ;Write to a location in the flash progra 00401 ;This routine returns in bank3 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00412 movulw 0x84 00412 movulw 0x55 00418 movulw 0x55 00419 movul 0x85 00419 movul 0x85 00419 movul 0x85 00419 movul 0x81 00410 bsf EECON1 00420 00411 brfs movul 0x84 00411 movul 0x84 00412 movul 0x84 00413 movul 0x84 00414 movul 0x84 00415 movul 0x84 00415 movul 0x84 00415 movul 0x84 00416 movul 0x84 00417 movul 0x84 00418 movul 0x84 00418 movul 0x84 00419 movul 0x84 00419 movul 0x84 00411 movul 0x84 00414 movul 0x88 00414 movul 0x84 00414 movul 0x84</pre>	00337;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT00402btfss PIR1,TXIF00403btfss PIR1,TXIF00404btfss PIR1,TXIF00405btfss PIR1,TXIF00405btfss PIR1,TXIF00406s-100407return00407return00408return00409;Write to a location in the flash progra00410;Mrite to a location in the flash progra00411;This routine returns in bank300412movuf movuf 0x8400413FlashWrite: Bank300416movuf 0x8400419;Mrite to a location in the flash progra00410;Mrite to a location in the flash progra00411;This routine returns in bank300412movuf movuf 0x8400413FlashWrite: Bank300416movuf 0x8400419movuf 0x8400411psf00412movuf 0x8400420movuf 2800421bsf00422pop00423nop00423pop00424pop00424pop	00396 ;	00396 ; Transmit byte in W register from USART 00398 ; This routine returns in banko 00399 SerialTransmit: Banko 00400 SerialTransmit: Banko 00401 btfsc PORTB,CTS_INPUT 00403 btfss PIRL,TXIF 00405 btfss PIRL,TXIF 00406 stal nest 00406 return 00406 return 00407 return 00407 return 00410 ; Address in EEADRH and EEADR, data in EE 00411 ; This routine returns in bank3 00412 movuf movuf data in EE 00413 FlashWrite: Bank3 00413 FlashWrite: Bank3 00414 movuf EECON1 00415 movuf EECON2 00415 movuf EECON2 00415 movuf EECON2 00416 movuf EECON2 00417 movuf EECON2 00418 movuf EECON2 00419 movuf EECON2 00419 movuf EECON2 00419 movuf EECON2 00419 movuf EECON2 00419 movuf EECON2 00419 movuf EECON2 00421 bsf EECON1,WR	00395 7.Transmit byte in W register from USART 00398 7.Transmit byte in W register from USART 00399 00400 00401 00401 00401 00401 00403 00405 00405 00406 00406 00406 00406 00406 00406 00407 00406 00407 00407 00407 00410 00411 7.This routine returns in bank3 00411 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00412 00412 00413 00416 00414 00416 00416 00417 00417 00417 00418 00418 00418 00418 00419 00419 00419 00419 00419 00410 000400 00410 00410 00410 00410 00410 00410 000	00395 00396 00397 7 Transmit byte in W register from USART 00398 00399 00400 00410 00400 00410 00410 00410 00411 7 This routine returns in bank3 00411 7 This routine returns in bank3 00411 00412 00411 00412 00411 00413 00411 00410 00411 00410 00411 00411 00410 00411 00410 00411 00410 00411 00411 00411 00411 00410 00411 00410 00411 00411 00411 00410 00411 00410 00411 00410 00411 00410 00411 00410 00411 00410 00411 00410 00411 00410 00411 00410 00411 00410 00411 00410 00410 00410 00410 00410 00410 00411 00410 00400 00410 00400 00400 00400 00400 00400 00400 00400 00400 00400 00400 00400 00400 00400 00400 00400 00400 00400 00400 000000 000000 000000 000000 000000	00395 ;	00395 :
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfss PIR1,TXIF 00401 btfss PIR1,TXIF 00405 coto \$-1 00406 return 00407 return 00407 return 00407 jrite to a location in the flash progra 00410 jrite to a location in the flash progra 00411 jThis routine returns in bank3 00412 00412 movuf EEADRH and EEADR, data in EE 00413 FlashWrite: Bank3 00414 movuf EECON1 00418 movuf EECON1 00419 movuf EECON1 00410 movuf EECON1 00410 movuf EECON2 00410 movuf EECON2 00420 movuf EECON1,WR 00422 00423 nop	00337;Transmit byte in W register from USART003398;This routine returns in bank0003399;This routine returns in bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT00402btfss PIR1,TXIF00403btfss PIR1,TXIF00404btfss PIR1,TXIF00405btfss PIR1,TXIF00406btfss PIR1,TXIF00407btfss PIR1,TXIF00408return00409;Write to a location in the flash progra00410;Address in EEADRH and EEADR, data in EE00411;This routine returns in bank300412movum movum bank300413FlashWrite: Bank300419movum bank300419movum bacs00419movum bank300412movum bank300413flashWrite: Bank300413movum bacs00413movum bacs0	00396 ;	00396 ; Transmit byte in W register from USART 00398 ; This routine returns in banko 00309 SerialTransmit: Banko 00401 SerialTransmit: Banko 00402 btfss PIRL, TXIF 00403 btfss PIRL, TXIF 00405 coto \$-1 00406 serialTransmit: Banko 00406 serialTransmit: Banko 00406 serialTransmit: Banko 00407 jwrite to a location in the flash program 00410 jwrite to a location in the flash program 00411 ; This routine returns in bank3 00413 FlashWrite: Bank3 00416 movlw 0x84 00418 movlw 0x84 00419 00416 movlw 0x84 00419 movwf EECON1 00410 movlw 0x83 00411 movlw 0x83 00411 movlw 0x83 00411 movlw 0x84 00412 movlw 0x83 00413 FlashWrite: Bank3 00414 movlw 0x84 00418 movlw 0x83 00419 movlw 0x83 00419 movlw 0x83 00419 movlw 0x83 00419 movlw 0x83 00410 movlw 0x83 00410 movlw 0x83 00420	00395 7 Transmit byte in W register from USART 00398 7 This routine returns in bank0 00399 6 reialTransmit: Bank0 00400 8 serialTransmit: Bank0 00401 00401 btfsc PORTB,CTS_INPUT 00403 9 00405 7-1 00406 7-1 00406 7-1 00406 7-1 00406 7-1 00407 9 movwf TXREG 00410 7 Address in EEADRH and EEADR, data in EEI 00411 7 This routine returns in bank3 00413 FlashWrite: Bank3 00415 00416 movuf EECON1 00417 movuf EECON1 00418 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1 00410 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00401 btfsc PORTB,CTS_INPUT 00403 stalTransmit: Bank0 00406 \$-1 00406 \$-1 00416 \$-1 00417 \$-1 00416 \$-1 000416 \$-1 000416 \$-1 00000 \$-1 00000 \$-1 000000 \$-1	00395 ; Transmit byte in W register from USART 00396 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00402 btfss PTR1,TXIF 00403 btfss PTR1,TXIF 00405 movwf TXREG 00406 return 00406 return 00400 ; Write to a location in the flash program 00410 ; Address in EEADRH and EEADR, data in EE 00411 ; This routine returns in bank3 00413 PlashWrite: Bank3 00414 movuf EECON1 00413 PlashWrite: Bank3 00414 movuf EECON1 00416 movuf EECON1 00417 movuf EECON1 00418 movuf EECON1 00419 movuf EECON2 00419 movuf EECON1 00420 movuf EECON1,WR	00335
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfss PIR1,TXIF 00403 btfss PIR1,TXIF 00405 cturn 00406 return 00406 return 00406 return 00406 return 00407 return 00410 ;Address in EEADRR, data in EE 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00416 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00417 00416 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1 00419 movuf EECON1 00410 movuf EECON1 00410 movuf EECON1 00410 movuf EECON1 00411 movuf EECON1 00411 movuf EECON1 00411 movuf EECON1 00411 movuf EECON1 00411 movuf EECON1 00411 movuf EECON1 00421 bsf movuf EECON1 00421 movuf EECON1 00421 movuf EECON1	00337;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT00402goto \$-100403btfss PIR1,TXIF00404btfss PIR1,TXIF00405return00406return00407return00407return00409;Write to a location in the flash program00410;Address in EEADRH and EEADR, data in EE00411;This routine returns in bank300412FlashWrite: Bank300413movuf EECON100416movuf EECON100416movuf EECON100417movuf EECON100418movuf EECON100419movuf EECON100421bsf EECON200432bsf EECON200432movuf EECON1, WR00433bsf EECON1, WR00433movuf EECON100434movuf EECON100433movuf EECON100434movuf EECON200433movuf EECON200433movuf EECON200433movuf EECON100433movuf EECON100433movuf EECON100433movuf EECON100433movuf EECON200433movuf EECON200433movuf EECON200433movuf EECON200433movuf EECON200433movuf EECON200433movuf EECON1<	00396 ;	00396 ;Transmit byte in W register from USART 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 Btfsc PORTB,CTS_INPUT 00402 Boto 00403 BerialTransmit: Bank0 00404 btfsc PORTB,CTS_INPUT 00401 btfsc PORTB,CTS_INPUT 00402 Boto \$-1 00403 Boto \$-1 00404 Boto \$-1 00405 Boto \$-1 00406 return Boto \$-1 00407 Bovwf TXREG Borda in EB 00409 Write to a location in the flash progran 00411 Progran 00411 Phis routine returns in bank3 In Bank3 00412 Bank3 00412 Bovvilw 0x84 00411 Phis movulw Bank3 00416 Bovvilw 0x84 00411 Phis movulw Bank3 00416 Bovvilw 0x84 00412 Bovvilw Bacon1 00416 Bovvilw 0x84 00411 Phis movvilw <td>00395 7.Transmit byte in W register from USART 00398 7.Transmit byte in W register from USART 00309 00400 00401 00401 00402 00403 00405 00405 00405 00406 00406 00406 00406 00406 00406 00410 00410 00410 00410 00411 00411 00411 00412 00411 00412 00411 00412 00411 00411 00411 00411 00412 00411 00411 00412 00411 00411 00411 00411 00411 00412 00411 00412 00411 00412 00411 00411 00412 00411 00412 00411 00412 00411 00412 00412 00410 00411 00412 00410 00411 00412 00410 00411 00412 00410 00411 00410 00411 00412 00410 00411 00410 00411 00412 00410 000010 00000 00000 000000 000000 000000 000000</td> <td>00395 00396 7 Transmit byte in W register from USART 00398 00398 00400 00401 00401 00402 00402 00402 00403 00403 00403 00405 00405 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00410 00410 00410 00410 00411 7 This routine returns in bank3 00411 7 This routine returns in bank3 00411 00415 00411 00415 00411 00416 00411 00412 00411 00411 00411 00411 00411 00411 00411 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00412 00411 00412 00411 00412 00412 00412 00412 00412 00412 00413 00412 00413 00412 00413 00414 00416 00411 00416 00417 00416 00417 00417 00418 00418 00418 00418 00419 00418 00419 00418 00419 00419 00419 00419 00411 00418 00418 00419 00418 00419 00418 00419 00418 00419 00418 00419 00419 00411 00418 00419 00419 00419 00411 00418 00419 00410 00419 00410 00410 00419 00410 00410 00410 00410 00410 00410 00410 00410 00410 00410 00410 00410 00410 00410 00410 000410 00410 00410 00410 00410 00410 00410 00410</td> <td>00395 ; This routine returns in banko 00396 ; This routine returns in banko 00399 ; This routine returns in banko 00400 SerialTransmit: Banko 00401 btfss PDRTB, CTS_INPUT 00402 90403 90400 \$-1 00403 9040 \$-1 00406 TXREG 00406 return 00407 7</td> <td>00395 ; Transmit byte in W register from USART 00396 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00390 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 Buffsc PORTB, CTS_INPUT 00403 buffss PIR1, TXIF 00404 goto \$-1 00403 buffss PIR1, TXIF 00404 goto \$-1 00405 movwf TXREG 00406 s-1 00407 goto \$-1 00408 s-1 00407 seturn 00408 seturn 00410 jAddress in EEADRH and EEADR, data in EE 00411 jThis routine returns in bank3 00412 movufm eECON1 00413 movufm eECON1 004140 movufm eECON1 00415 movuff eECON1 00416 movuff eECON1 00419 movuff eECON1 00410 movuff eECON1 00412 movuff eECON1 00413 movuff eECON1 00420 movuff eECON1</td>	00395 7.Transmit byte in W register from USART 00398 7.Transmit byte in W register from USART 00309 00400 00401 00401 00402 00403 00405 00405 00405 00406 00406 00406 00406 00406 00406 00410 00410 00410 00410 00411 00411 00411 00412 00411 00412 00411 00412 00411 00411 00411 00411 00412 00411 00411 00412 00411 00411 00411 00411 00411 00412 00411 00412 00411 00412 00411 00411 00412 00411 00412 00411 00412 00411 00412 00412 00410 00411 00412 00410 00411 00412 00410 00411 00412 00410 00411 00410 00411 00412 00410 00411 00410 00411 00412 00410 000010 00000 00000 000000 000000 000000 000000	00395 00396 7 Transmit byte in W register from USART 00398 00398 00400 00401 00401 00402 00402 00402 00403 00403 00403 00405 00405 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00406 00410 00410 00410 00410 00411 7 This routine returns in bank3 00411 7 This routine returns in bank3 00411 00415 00411 00415 00411 00416 00411 00412 00411 00411 00411 00411 00411 00411 00411 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00412 00411 00412 00411 00412 00412 00412 00412 00412 00412 00413 00412 00413 00412 00413 00414 00416 00411 00416 00417 00416 00417 00417 00418 00418 00418 00418 00419 00418 00419 00418 00419 00419 00419 00419 00411 00418 00418 00419 00418 00419 00418 00419 00418 00419 00418 00419 00419 00411 00418 00419 00419 00419 00411 00418 00419 00410 00419 00410 00410 00419 00410 00410 00410 00410 00410 00410 00410 00410 00410 00410 00410 00410 00410 00410 00410 000410 00410 00410 00410 00410 00410 00410 00410	00395 ; This routine returns in banko 00396 ; This routine returns in banko 00399 ; This routine returns in banko 00400 SerialTransmit: Banko 00401 btfss PDRTB, CTS_INPUT 00402 90403 90400 \$-1 00403 9040 \$-1 00406 TXREG 00406 return 00407 7	00395 ; Transmit byte in W register from USART 00396 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00390 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 Buffsc PORTB, CTS_INPUT 00403 buffss PIR1, TXIF 00404 goto \$-1 00403 buffss PIR1, TXIF 00404 goto \$-1 00405 movwf TXREG 00406 s-1 00407 goto \$-1 00408 s-1 00407 seturn 00408 seturn 00410 jAddress in EEADRH and EEADR, data in EE 00411 jThis routine returns in bank3 00412 movufm eECON1 00413 movufm eECON1 004140 movufm eECON1 00415 movuff eECON1 00416 movuff eECON1 00419 movuff eECON1 00410 movuff eECON1 00412 movuff eECON1 00413 movuff eECON1 00420 movuff eECON1
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00403 btfsc PORTB,CTS_INPUT 00405 btfss PIR1,TXIF 00405 return 00406 return 00406 return 00409 ;Write to a location in the flash progral 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00415 00416 movuf EEADR, data in EE 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00416 movuf EECON1 00419 00416 movuf EECON1 00419 00416 movuf EECON2 00419 00411 movuf EECON2 00420 movuf EECON2 00420 movuf EECON2 00421 movuf EECON2 00421 movuf EECON2 00421 movuf EECON2 00420 movuf EECON2 00421 movuf EECON2	00337;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT00402btfss PIR1,TXIF00403goto \$-100404btfss PIR1,TXIF00405btfss PIR1,TXIF00406return00407return00407return00408return00409;Write to a location in the flash progran00410;Address in EBADRH and EBADR, data in EB00411;This routine returns in bank300412movuf movuf EBCON100413FlashWrite: Bank300416movuf EBCON100415movuf EBCON200416movuf EBCON200420wovlw EBCON200421movvef EBCON200421movvef EBCON200421bsf <econ1,wr< td="">00422bsf<econ1,wr< td="">00423nop</econ1,wr<></econ1,wr<>	00396 ;	00395 ;Transmit byte in W register from USART 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 Btfsc PORTB,CTS_INPUT 00402 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00402 btfsc PORTB,CTS_INPUT 00403 BerlalTransmit: Bank0 00404 btfsc PORTB,CTS_INPUT 00402 btfsc PORTB,CTS_INPUT 00403 btfsc PORTB,CTS_INPUT 00404 btffsc PORTB,CTS_INPUT 00405 btffsc PORTB,CTS_INPUT 00406 btffsc PORTB,CTS_INPUT 00407 btffsc PORTB,CTS_INPUT 00408 return 00406 stal 00407 movwf TXREG 00408 return 00401 return 00410 return 00411 return 00411 <td< td=""><td>00395 ;</td><td>00395 00396 00397 7 Transmit byte in W register from USART 00398 00400 00410 00410 00410 00411 7 This routine returns in bank3 00412 00411 7 This routine returns in bank3 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00412 00412 00412 00412 00412 00413 00412 00414 00416 00414 00416 00416 00416 00416 00417 00417 00418 00418 00418 00419 00419 00411 00416 00411 00412 00411 00412 00412 00411 00412 00413 00412 00413 00412 00413 00413 00414 00414 00416 00410 00411 00412 00411 00412 00413 00412 00413 00412 00413 00414 00416 00414 00416 00417 00416 00417 00418 00418 00418 00418 00418 00418 00418 00419 00419 00419 00419 00419 00419 00419 00410 00410 00410 00410 00410 00410 00410 00411 00410 00411 00416 00411 00416 00417 00417 00418 00419 00418 00418 00419 00418 00419 00418 000418 00418 00418 00418 00418 00418 00418</td><td>00395 ;</td><td>00395 </td></td<>	00395 ;	00395 00396 00397 7 Transmit byte in W register from USART 00398 00400 00410 00410 00410 00411 7 This routine returns in bank3 00412 00411 7 This routine returns in bank3 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00411 00412 00412 00412 00412 00412 00412 00413 00412 00414 00416 00414 00416 00416 00416 00416 00417 00417 00418 00418 00418 00419 00419 00411 00416 00411 00412 00411 00412 00412 00411 00412 00413 00412 00413 00412 00413 00413 00414 00414 00416 00410 00411 00412 00411 00412 00413 00412 00413 00412 00413 00414 00416 00414 00416 00417 00416 00417 00418 00418 00418 00418 00418 00418 00418 00419 00419 00419 00419 00419 00419 00419 00410 00410 00410 00410 00410 00410 00410 00411 00410 00411 00416 00411 00416 00417 00417 00418 00419 00418 00418 00419 00418 00419 00418 000418 00418 00418 00418 00418 00418 00418	00395 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00403 btfss PIR1,TXIF 00405 teturn 00405 return 00406 return 00406 return 00407 ;This routine return 00409 ;Write to a location in the flash progran 00411 ;This routine returns in bank3 00412 routine returns in bank3 00413 FlashWrite: Bank3 00415 00415 movuf EECON1 00416 movuk 0X84 00415 00417 movuk EECON1 00416 movuk 0X84 00417 00415 movuk EECON1 00417 00415 movuk EECON1 00417 00415 movuk EECON1 00418 movuk EECON1 00419 00415 movuk EECON1 00419 00415 movuk EECON1 00419 00411 movuk EECON1 00419 00413 movuk EECON1 00419 00413 movuk EECON1 00419 00413 movuk EECON2 00419 00413 movuk EECON2 00419 00413 movuk EECON2 00419 00413 movuk EECON2 00419 00413 movuk EECON2 00420 movuk EECON2 00420 movuk EECON2 00421 movuk EECON2	00337;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT00402btfss PIR1,TXIF00403goto \$-100404btfss PIR1,TXIF00404btfss PIR1,TXIF00405btfss PIR1,TXIF00406s-100407ceturn00407return00407return00407return00408return00409;Write to a location in the flash progra00411;This routine returns in bank300412movuf EEADRH and EEADR, data in EE00413FlashWrite: Bank300415movuf 0x8400416movuf 0x6500411;This routine returns in bank300412movuf EECON100413movuf EECON100413movuf 0x6500413movuf EECON100413movuf EECON100413movuf EECON100413movuf EECON100413movuf EECON100413movuf EECON100413movuf EECON100420movuf EECON100421movuf EECON100422movuf EECON100422movuf EECON100423movuf EECON100423movuf EECON100423movuf EECON100423movuf EECON100423movuf EECON100423movuf EECON1 <td>00396 ;</td> <td>00396 ;Transmit byte in W register from USART 00399 ;This routine returns in bank0 00399 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00402 btffsc PORTB,CTS_INPUT 00403 btffsc PORTB,CTS_INPUT 00404 btffsc PORTB,CTS_INPUT 00402 btffsc PORTB,CTS_INPUT 00403 btffsc PORTB,CTS_INPUT 00404 btffsc PORTB,CTS_INPUT 00405 btffsc PORTB,CTS_INPUT 00406 btffsc PORTB,CTS_INPUT 00407 btffsc PORTB,CTS_INPUT 00406 btffsc PORTB,CTS_INF 00407 btffsc PORTB,CTS_INF 00406 struth 00407 btffsc PORTB,CTS_INF 00406 struth 00407 movvef TXREG 00408 struth 00410 struth 00411 fthis routine returns in bank3 00412 movvef EECON1 00413 movvef EECON1 00416 movvef EECON2 00419 movvef EECON2</td> <td>00395 ;</td> <td>00395 7 Transmit byte in W register from USART 00398 7 Transmit byte in W register from USART 00398 7 Transmit byte in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00402 goto \$-1 00403 btfss PIR1,TXIF 00406 return 00406 return 00407 return 00407 return 00409 7 return 00401 7 fris routine returns in bank3 00411 7 fris routine returns in bank3 00412 00411 movur EECON1 00412 movur EECON1 00413 flashWrite: Bank3 00416 movur EECON1 00416 movur EECON2 00419 00412 00411 0x84 00416 movur EECON1 00416 movur EECON1 00418 movur EECON1 00419 movur EECON1 00420 movur EECON1 004218 movur EECON1 004218 movur EECON1 004219 movur EECON1 004219 movur EECON1 004210 movur EECON1 004210 movur EECON1 004211 movur EECON1 004211 movur EECON1 00422 movur EECON1 00423 movur EECON2 00423 movur EECON2 0043 movur EECON2 0043 movur EECON3 0043 movur EECON3</td> <td>00395 ;7ransmit byte in W register from USART 00398 ;7riansmit byte in W register from USART 00398 ;7riansmit byte in W register from USART 00399 ;7riansmit byte in W register from USART 00399 ;7riansmit byte in W register from USART 00399 serialTransmit Banko 00401 btffsc<portb,cts_input< td=""> 00402 goto \$-1 00403 stffsc<portb,tts< td=""> 00404 goto \$-1 00405 ptfss<ppre> \$-1 00406 return goto \$-1 00407 return \$-1 00408 return \$-1 00409 #Write to a location in the flash progras 00411 ?This routine returns in bank3 00411 ?This routine returns in bank3 00412 movuf 00412 00413 FlashWrite: Bank3 00419 movuf 0x84 00410 00411 movuf 0x84 00411 movuf 0x84 00411 00412 00412 00412 00412</ppre></portb,tts<></portb,cts_input<></td> <td>00395 </td>	00396 ;	00396 ;Transmit byte in W register from USART 00399 ;This routine returns in bank0 00399 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00402 btffsc PORTB,CTS_INPUT 00403 btffsc PORTB,CTS_INPUT 00404 btffsc PORTB,CTS_INPUT 00402 btffsc PORTB,CTS_INPUT 00403 btffsc PORTB,CTS_INPUT 00404 btffsc PORTB,CTS_INPUT 00405 btffsc PORTB,CTS_INPUT 00406 btffsc PORTB,CTS_INPUT 00407 btffsc PORTB,CTS_INPUT 00406 btffsc PORTB,CTS_INF 00407 btffsc PORTB,CTS_INF 00406 struth 00407 btffsc PORTB,CTS_INF 00406 struth 00407 movvef TXREG 00408 struth 00410 struth 00411 fthis routine returns in bank3 00412 movvef EECON1 00413 movvef EECON1 00416 movvef EECON2 00419 movvef EECON2	00395 ;	00395 7 Transmit byte in W register from USART 00398 7 Transmit byte in W register from USART 00398 7 Transmit byte in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00402 goto \$-1 00403 btfss PIR1,TXIF 00406 return 00406 return 00407 return 00407 return 00409 7 return 00401 7 fris routine returns in bank3 00411 7 fris routine returns in bank3 00412 00411 movur EECON1 00412 movur EECON1 00413 flashWrite: Bank3 00416 movur EECON1 00416 movur EECON2 00419 00412 00411 0x84 00416 movur EECON1 00416 movur EECON1 00418 movur EECON1 00419 movur EECON1 00420 movur EECON1 004218 movur EECON1 004218 movur EECON1 004219 movur EECON1 004219 movur EECON1 004210 movur EECON1 004210 movur EECON1 004211 movur EECON1 004211 movur EECON1 00422 movur EECON1 00423 movur EECON2 00423 movur EECON2 0043 movur EECON2 0043 movur EECON3 0043 movur EECON3	00395 ;7ransmit byte in W register from USART 00398 ;7riansmit byte in W register from USART 00398 ;7riansmit byte in W register from USART 00399 ;7riansmit byte in W register from USART 00399 ;7riansmit byte in W register from USART 00399 serialTransmit Banko 00401 btffsc <portb,cts_input< td=""> 00402 goto \$-1 00403 stffsc<portb,tts< td=""> 00404 goto \$-1 00405 ptfss<ppre> \$-1 00406 return goto \$-1 00407 return \$-1 00408 return \$-1 00409 #Write to a location in the flash progras 00411 ?This routine returns in bank3 00411 ?This routine returns in bank3 00412 movuf 00412 00413 FlashWrite: Bank3 00419 movuf 0x84 00410 00411 movuf 0x84 00411 movuf 0x84 00411 00412 00412 00412 00412</ppre></portb,tts<></portb,cts_input<>	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00403 btfss PIR1,TXIF 00405 btfss PIR1,TXIF 00405 return 00406 return 00407 return 00409 ;Write to a location in the flash progra 00410 ;Address in EEADRH and EEADR, data in EE 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00415 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00416 movuf EECON2 00419 movuf EECON2 00419 movuf EECON2 00419 movuf EECON2 00419 movuf EECON2 00419 movuf EECON2 00420 bsf EECON2 00421 bsf EECON2	003397;Transmit byte in W register from USART00398;This routine returns in bank000399SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT00402btfsc PORTB,CTS_INPUT00403btfss PIR1,TXIF00404btfss PIR1,TXIF00404btfss PIR1,TXIF00405btfss PIR1,TXIF00406s-100407btfss PIR1,TXIF00407btfss PIR1,TXIF00407seturn00407stata in EB00407stata in EBADRH and EEADR, data in EB00411;This routine returns in bank300412movlw BEADR, data in EB00413FlashWrite: Bank300413movlw BECON100419movlw BECON200419movlw BECON200410bsf00411povel00412movuf BECON200413facutine returns in bank300414movuf BECON100415movuf BECON200416movuf BECON200417povel BECON200418movuf BECON200419movuf BECON200421bsf00421bsf00421bsf00422bsf00422bsf	00396 ;	00336 ;Transmit byte in W register from USART 003393 ;Transmit byte in W register from USART 003393 serialTransmit byte in W register from USART 003393 serialTransmit byte in W register from USART 003393 serialTransmit byte in W register from USART 003401 serialTransmit byte in W register from USART 00401 btfsc PORTB,CTS_INPUT 00402 btfsc PORTB,CTS_INPUT 00403 btfsc PORTB,CTS_INPUT 00404 goto \$-1 00405 btfsc PORTB,CTS_INPUT 00406 serialTransmit btfsc PORTB,CTS_INPUT 00407 btfsc PORTB,CTS_INPUT 00408 return 00407 movwf TXREG 00407 return 00408 return 00401 return 00410 return 00411 return 00412 movuf 00413 movuf 00416 movuf 00417 movuf 00418 movuf 00419 movuf 00410 movuf 00411	00395 7.Transmit byte in W register from USART 00398 7.This routine returns in bank0 00309 00400 SerialTransmit Bank0 00401 btfss PIR1,TXIF 00401 btfss PIR1,TXIF 00405 c. \$-1 00406 return 00406 return 00407 return 00407 return 00408 7	00395 00396; ;Transmit byte in W register from USART 00398; ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00402 goto \$-1 00403 btfss PIR1,TXIF 00404 btfss PIR1,TXIF 00406 return 00406 return 00406 return 00407 00407 00408 jrrite to a location in the flash progra 00411 jThis routine returns in bank3 00411 jThis routine returns in bank3 00412 movuf EECON1 00418 movuf EECON1 00418 movuf EECON1 00419 movuf EECON1 00411 ptite: Bank3 00411 provuf EECON1 00412 movuf EECON1 00412 movuf EECON1 00413 flashWrite: Bank3 00414 movuf EECON1 00415 movuf EECON1 00415 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00419 movuf EECON1,WR	00395 7.Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfss PIR1,TXIF 00405 btfss PIR1,TXIF 00405 return 00406 return 00406 return 00406 returns in bank3 00410 ;Address in EEADRH and EEADR, data in EE 00411 ;This routine returns in bank3 00412 returns in bank3 00413 FlashWrite: Bank3 00414 movuf EECON1 00416 movuh EECON1 00415 movuh EECON1 00416 movuh Ox84 00416 movuh Ox84 00412 returns in bank3 00412 movuh EECON1 00413 movuh EECON1 00416 movuh EECON1 00416 movuh EECON1 00416 movuh EECON1 00417 movuh EECON1 00418 movuh EECON1 00419 movuh EECON1	00395 ;*Transmit byte in W register from USART 00396 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;Fransmit byte in W register from USART 00399 serialTransmit: Bank0 00401 btfss PIRI, TXIF 00402 serialTransmit: Fank0 00403 btfss PIRI, TXIF 00404 btfss PIRI, TXIF 00405 return 00406 return 00407 return 00408 return 00401 in EEADRH and EEADR, data in EE 00411 intic returns in bank3 00411 intic returns in bank3 00412 movuf 0x84 00413 movuf 0x84 00416 movuf 0x84 00418 movuf 0x84 00419 movuf 0x84 00410 movuf 0x84 00412
<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00403 btfsc PORTB,CTS_INPUT 00405 btfss PIR1,TXIF 00406 *1 00406 return 00407 00406 return 00407 jwrite to a location in the flash progran 00411 ;This routine returns in bank3 00412 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00415 00415 movvir BEADR, data in EE 00417 00416 movlw 0x84 00418 movlw 0x84 00415 00411 movvir BECON1 00418 00415 movvir BECON1 00410 bank3 00410 movvir BECON1 00410 movvir BECON1 00411 bank3 00411 movvir BECON1 00410 movvir BECON1 00410 movvir BECON2 00410 movvir BECON2</pre>	<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00402 btfss PIR1,TXIF 00405 btfss PIR1,TXIF 00406 5-1 00406 return 00407 return 00407 return 00407 ;************************************</pre>	00396 ;	00395 ;Transmit byte in W register from USART 00398 ;Transmit byte in W register from USART 00399 srialTransmit byte in W register from USART 00399 srialTransmit byte in W register from USART 00399 btfsc PORTB, CTS_INPUT 00401 btfsc PORTB, CTS_INPUT 00402 goto \$-1 00403 movwf TXREG 00404 strait strait 00405 btfss PIRI, TXIF 00406 strait strait 00407 btfss PIRI, TXREG 00407 strait strait 00407 return strag 00408 stratin strad 00409 movwf strag 00410 stratin bank3 00411 stratin bank3 00411 movutine returns in bank3 strog 00411 movut stron1 00411 movut stron1 00412 movut stron1 00413 movut stron1 00416 movut stron1 <td>00395 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 9000 \$-1 00405 btfss PIR1, TXIF 00406 return 00406 return 00407 return 00407 return 00401 ; This routine returns in bank3 00411 ; This routine returns in bank3 00412 FlashWrite: Bank3 00413 FlashWrite: Bank3 00414 movuf EEQN1 00416 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00418 movuf EECON1 00418 movuf EECON1 00419 movuf EECON1 00410 movuf EECON1 00410 movuf EECON1 00411 present bank3 00411 movuf EECON1 00412 movuf EECON1 00413 bank3 00414 movuf EECON1 00415 movuf EECON1 00416 movuf EECON1 00418 movuf EECON1 00419 movuf EECON1 00410 movuf EECON1 00410 movuf EECON1</td> <td>00395 ;7ransmit byte in W register from USART 00396 ;7rhis routine returns in bank0 00399 ;7rhis routine returns in bank0 00399 serialTransmit byte in W register from USART 00399 serialTransmit byte in W register from USART 00399 serialTransmit such 00401 btfsc PORTB,CTS_INPUT 00402 goto \$-1 00403 btfss PIRI,TXIF 00404 goto \$-1 00405 return goto \$-1 00406 movwf TXREG INBUT 00407 movwf TXREG INBUT 00407 movwf TXREG INBUT 00408 in the flash program INBUK 00410 in the flash program INBUK 00411 in the flash program INBUK 00411 in bank3 INBUK 00411 interurns in bank3 INBUK 00411 movwf EECON1 00412 movwf INS 00413 movwf EECON1 00416<td>00395 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00399 SerialTransmit Bank0 00401 Berfsc PORTB,CTS_INPUT 00402 SerialTransmit: Bank0 00403 btfsc PIR1,TXIF 00404 Berfsc PORTB,CTS_INPUT 00405 Berfsc PIR1,TXIF 00406 SerialTransmit Bank0 00407 SerialTransmit Bank3 00407 Serial movutine returns in bank3 00407 Serie ERADRH and ERADR, data in EB 00408 Serie Bank3 00411 FlashWrite: Bank3 00411 FlashWrite: Bank3 00411 Prints routine returns in bank3 00411 FlashWrite: Bank3 00411 Movutine EECON1 00411 Proverime Ox84 00411 Proverime Ox84 00411 Proverime PECON1 00412 Movutine Ox84 00413 Movutine PECON1 00416 Movutine Ox84 00417 Movutine PECON1 00418 Movutine</td><td>00395 </td></td>	00395 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 9000 \$-1 00405 btfss PIR1, TXIF 00406 return 00406 return 00407 return 00407 return 00401 ; This routine returns in bank3 00411 ; This routine returns in bank3 00412 FlashWrite: Bank3 00413 FlashWrite: Bank3 00414 movuf EEQN1 00416 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00418 movuf EECON1 00418 movuf EECON1 00419 movuf EECON1 00410 movuf EECON1 00410 movuf EECON1 00411 present bank3 00411 movuf EECON1 00412 movuf EECON1 00413 bank3 00414 movuf EECON1 00415 movuf EECON1 00416 movuf EECON1 00418 movuf EECON1 00419 movuf EECON1 00410 movuf EECON1 00410 movuf EECON1	00395 ;7ransmit byte in W register from USART 00396 ;7rhis routine returns in bank0 00399 ;7rhis routine returns in bank0 00399 serialTransmit byte in W register from USART 00399 serialTransmit byte in W register from USART 00399 serialTransmit such 00401 btfsc PORTB,CTS_INPUT 00402 goto \$-1 00403 btfss PIRI,TXIF 00404 goto \$-1 00405 return goto \$-1 00406 movwf TXREG INBUT 00407 movwf TXREG INBUT 00407 movwf TXREG INBUT 00408 in the flash program INBUK 00410 in the flash program INBUK 00411 in the flash program INBUK 00411 in bank3 INBUK 00411 interurns in bank3 INBUK 00411 movwf EECON1 00412 movwf INS 00413 movwf EECON1 00416 <td>00395 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00399 SerialTransmit Bank0 00401 Berfsc PORTB,CTS_INPUT 00402 SerialTransmit: Bank0 00403 btfsc PIR1,TXIF 00404 Berfsc PORTB,CTS_INPUT 00405 Berfsc PIR1,TXIF 00406 SerialTransmit Bank0 00407 SerialTransmit Bank3 00407 Serial movutine returns in bank3 00407 Serie ERADRH and ERADR, data in EB 00408 Serie Bank3 00411 FlashWrite: Bank3 00411 FlashWrite: Bank3 00411 Prints routine returns in bank3 00411 FlashWrite: Bank3 00411 Movutine EECON1 00411 Proverime Ox84 00411 Proverime Ox84 00411 Proverime PECON1 00412 Movutine Ox84 00413 Movutine PECON1 00416 Movutine Ox84 00417 Movutine PECON1 00418 Movutine</td> <td>00395 </td>	00395 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00399 SerialTransmit Bank0 00401 Berfsc PORTB,CTS_INPUT 00402 SerialTransmit: Bank0 00403 btfsc PIR1,TXIF 00404 Berfsc PORTB,CTS_INPUT 00405 Berfsc PIR1,TXIF 00406 SerialTransmit Bank0 00407 SerialTransmit Bank3 00407 Serial movutine returns in bank3 00407 Serie ERADRH and ERADR, data in EB 00408 Serie Bank3 00411 FlashWrite: Bank3 00411 FlashWrite: Bank3 00411 Prints routine returns in bank3 00411 FlashWrite: Bank3 00411 Movutine EECON1 00411 Proverime Ox84 00411 Proverime Ox84 00411 Proverime PECON1 00412 Movutine Ox84 00413 Movutine PECON1 00416 Movutine Ox84 00417 Movutine PECON1 00418 Movutine	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00403 btfss PIR1,TXIF 00405 stell movwf TXREG 00406 return 00406 return 00406 return 00408 ;	00397;Transmit byte in W register from USART00398;This routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT00402btffsc PORTB,CTS_INPUT00403btffsc PORTB,CTS_INPUT00404btffsc PORTB,CTS_INPUT00405btffsc PORTB,CTS_INPUT00406btffsc PORTB,CTS_INPUT00407btffsc PORTB,CTS_INPUT00408cuto00407cuto00407cuto00407cuto00407cuto00407cuto00407cuto00408cutocutoseturn00407cuto00408cutocutoseturn00407cuto00408cutocutoseturn00410cutocutocuto00411cutocutocuto00412powle00413flashWrite:00415movle00416cuto00417movle00418movle00419cuto00419cuto00419cuto00419cuto00419cuto00419cuto00419cuto00420cuto00420cuto00420cuto00421cuto00422cuto00422cuto00422cuto <t< td=""><td>00396 ;</td><td>00336 ;Transmit byte in W register from USART 003393 ;This routine returns in bank0 003393 SerialTransmit: Bank0 00401 Btfsc PORTB,CTS_INPUT 00402 Btfsc PORTB,CTS_INPUT 00401 btfsc PORTB,CTS_INPUT 00402 Btfsc PORTB,CTS_INPUT 00403 Btfsc PORTB,CTS_INPUT 00404 Boto \$-1 00405 btfsc PORTB,CTS_INPUT 00406 Btfsc PORTB,CTS_INPUT 00407 Boto \$-1 00406 Flash program 00407 Flash program 00408 FlashRt and EEADRH and EEADR, data in EE 00410 FlashWrite: Bank3 00411 FlashWrite: Bank3 00411 Prover Bank3 004115 Prove</td><td>00395 ; Transmit byte in W register from USART 00396 ; Transmit byte in W register from USART 00309 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT 00402 btfss PIR1, TXIF 00403 btfss PIR1, TXIF 00405 return 00406 returns in bank3 00400 ; Write to a location in the flash program 00401 ; This routine returns in bank3 00411 ; This routine returns in bank3 00411 ; This routine returns in bank3 00412 00411 movum EECON1 00416 movum EECON1 00416 movum EECON1 00416 movum EECON1 00416 movum EECON1 00416 movum EECON1 00419 movum EECON1, WR</td><td>00395 7.Transmit byte in W register from USART 00398 7.This routine returns in bank0 00309 00400 00401 00402 00402 00403 00404 00405 00405 00405 00405 00406 00405 00406 00406 00406 00406 00407 00406 00407 00408 7.TXEG 00408 7.TXEG 00408 7.TXEG 00408 7.TXEG 00401 7.TXEG 00408 7.TXEG 00401 7.TXEG 00410 00415 00415 00416 00416 00416 00416 00419 00417 00410 00419 00419 00410 00419 00410 00419 00410 000410 00410 00410 00410 00410 00410</td><td>00395 ;Transmit byte in W register from USART 00398 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 SerialTransmit byte in W register from USART 00399 SerialTransmit byte in W register from USART 00399 SerialTransmit successes 00401 SerialTransmit: Bank0 00402 Butfsc PORTB,CTS_INPUT 00403 SerialTransmit: Bank0 00404 SerialTransmit: Bank0 00405 Serial 00406 Butfsc 00407 Serial 00408 Serial 00409 Movwf 00410 Swrite to a location in the flash program 00411 Frins routine returns in bank3 00411 Frins movulw Ox84 00411 Pontine Dovedion 00411 Frins movulw Ox84 00411 Movvef EBCON1 00411 Movvef EBCON1 00411 Movvef EBCON1 00412 Movvef EBCON1 00412 Movvef E</td><td>00395 </td></t<>	00396 ;	00336 ;Transmit byte in W register from USART 003393 ;This routine returns in bank0 003393 SerialTransmit: Bank0 00401 Btfsc PORTB,CTS_INPUT 00402 Btfsc PORTB,CTS_INPUT 00401 btfsc PORTB,CTS_INPUT 00402 Btfsc PORTB,CTS_INPUT 00403 Btfsc PORTB,CTS_INPUT 00404 Boto \$-1 00405 btfsc PORTB,CTS_INPUT 00406 Btfsc PORTB,CTS_INPUT 00407 Boto \$-1 00406 Flash program 00407 Flash program 00408 FlashRt and EEADRH and EEADR, data in EE 00410 FlashWrite: Bank3 00411 FlashWrite: Bank3 00411 Prover Bank3 004115 Prove	00395 ; Transmit byte in W register from USART 00396 ; Transmit byte in W register from USART 00309 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT 00402 btfss PIR1, TXIF 00403 btfss PIR1, TXIF 00405 return 00406 returns in bank3 00400 ; Write to a location in the flash program 00401 ; This routine returns in bank3 00411 ; This routine returns in bank3 00411 ; This routine returns in bank3 00412 00411 movum EECON1 00416 movum EECON1 00416 movum EECON1 00416 movum EECON1 00416 movum EECON1 00416 movum EECON1 00419 movum EECON1, WR	00395 7.Transmit byte in W register from USART 00398 7.This routine returns in bank0 00309 00400 00401 00402 00402 00403 00404 00405 00405 00405 00405 00406 00405 00406 00406 00406 00406 00407 00406 00407 00408 7.TXEG 00408 7.TXEG 00408 7.TXEG 00408 7.TXEG 00401 7.TXEG 00408 7.TXEG 00401 7.TXEG 00410 00415 00415 00416 00416 00416 00416 00419 00417 00410 00419 00419 00410 00419 00410 00419 00410 000410 00410 00410 00410 00410 00410	00395 ;Transmit byte in W register from USART 00398 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 SerialTransmit byte in W register from USART 00399 SerialTransmit byte in W register from USART 00399 SerialTransmit successes 00401 SerialTransmit: Bank0 00402 Butfsc PORTB,CTS_INPUT 00403 SerialTransmit: Bank0 00404 SerialTransmit: Bank0 00405 Serial 00406 Butfsc 00407 Serial 00408 Serial 00409 Movwf 00410 Swrite to a location in the flash program 00411 Frins routine returns in bank3 00411 Frins movulw Ox84 00411 Pontine Dovedion 00411 Frins movulw Ox84 00411 Movvef EBCON1 00411 Movvef EBCON1 00411 Movvef EBCON1 00412 Movvef EBCON1 00412 Movvef E	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00403 btfss PIR1,TXIF 00405 btfss PIR1,TXIF 00405 ctot \$-1 00406 return 00406 return 00407 ;This routine return in the flash progra 00410 ;Address in EEADRH and EEADR, data in EE 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00415 movuf EECON1 00415 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00415 movuf EECON1 00415 movuf EECON1 00415 movuf EECON1 00415 movuf EECON1 00415 movuf EECON1 00415 movuf EECON1	00397;Transmit byte in W register from USART00398;This routine returns in bank000399SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT00402btfss PIR1,TXIF00403btfss PIR1,TXIF00404btfss PIR1,TXIF00405btfss PIR1,TXIF00406s-100407btfss PIR1,TXIF00407btfss PIR1,TXIF00407sqoto \$-100407btfss PIR1,TXIF00407btfss PIR1,TXIF00407soto \$-100407return00407return00407soto \$-100407movwf TXREG00410jMrite to a location in the flash progran00411jThis routine returns in bank300412movlw 0x8400413FlashWrite: Bank300416movlw 0x8400417movlw 0x8400418movlw 0x8400419movlw 0x8400419movlw 0x8400419movuf EECON100419movuf EECON200419movuf EECON2004	00396 ;	00336 ;Transmit byte in W register from USART 003393 ;Transmit byte in W register from USART 003393 serialTransmit byte in W register from USART 003393 serialTransmit byte in W register from USART 003393 serialTransmit byte in W register from USART 003400 serialTransmit byte in W register from USART 00401 btfsc PORTB,CTS_INPUT 00402 btfsc PORTB,CTS_INPUT 00403 btfsc PORTB,CTS_INPUT 00404 goto \$-1 00405 btfsc PORTB,CTS_INPUT 00406 btfss PIRI,TXIF 00407 btfss PIRI,TREG 00410 proto \$-1 00411 proto \$-1 00412 bovtine returns in bank3 00411 bovtine returns in bank3 </td <td>00395 00396 ;</td> <td>00395 ;:rransmit byte in W register from USART 00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 serialTransmit: Bank0 00401 btfsc<pre>poRTB,CTS_INPUT 00402 serialTransmit: Bank0 00403 btfsc<pre>poRTB,CTS_INPUT 00404 btfsc<pre>poRTB,TS_INPUT 00405 btfsc<pre>poRTB,TS_INPUT 00406 btfsc<pre>ports,TIR 00407 btfsc<pre>ports,TIR 00406 seturn 00407 movwf<pre>press 00408 return 00409 imovwf<pre>press 00410 imovwf<pre>press 00411 imovwf<pre>progra 00412 movuf<pre>progra 00413 pank3 00415 movuf 00416 movuf 00417 movuf 00418 movuf 00419 movuf 00419 movuf 00419 movuf 00419 movuf 00419 movuf 00419 <</pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></td> <td>003355 003395 ;Transmit byte in W register from USART 003398 ;This routine returns in bank0 003399 ;This routine returns in bank0 003399 ;Transmit byte in W register from USART 003399 ;This routine returns in bank0 00401 btfsc PORTB,CTS_INPUT 00401 btfsc PORTB,CTS_INPUT 00402 goto \$-1 00403 poto \$-1 00404 movwf TXREG 00405 return goto 00406 return \$-1 00407 movwf TXREG 00407 nov \$-1 00407 movwf TXREG 00407 movwf \$-1 00407 movwf \$-1 00410 \$-1 movwf 00411 \$-1 \$-1 00412 \$-1 \$-1 00413 \$-1 \$-1 00415 \$-1 \$-1 00416 \$-1 \$-1 00419 \$-1 \$-1 004</td> <td>00395 </td>	00395 00396 ;	00395 ;:rransmit byte in W register from USART 00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 serialTransmit: Bank0 00401 btfsc <pre>poRTB,CTS_INPUT 00402 serialTransmit: Bank0 00403 btfsc<pre>poRTB,CTS_INPUT 00404 btfsc<pre>poRTB,TS_INPUT 00405 btfsc<pre>poRTB,TS_INPUT 00406 btfsc<pre>ports,TIR 00407 btfsc<pre>ports,TIR 00406 seturn 00407 movwf<pre>press 00408 return 00409 imovwf<pre>press 00410 imovwf<pre>press 00411 imovwf<pre>progra 00412 movuf<pre>progra 00413 pank3 00415 movuf 00416 movuf 00417 movuf 00418 movuf 00419 movuf 00419 movuf 00419 movuf 00419 movuf 00419 movuf 00419 <</pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre>	003355 003395 ;Transmit byte in W register from USART 003398 ;This routine returns in bank0 003399 ;This routine returns in bank0 003399 ;Transmit byte in W register from USART 003399 ;This routine returns in bank0 00401 btfsc PORTB,CTS_INPUT 00401 btfsc PORTB,CTS_INPUT 00402 goto \$-1 00403 poto \$-1 00404 movwf TXREG 00405 return goto 00406 return \$-1 00407 movwf TXREG 00407 nov \$-1 00407 movwf TXREG 00407 movwf \$-1 00407 movwf \$-1 00410 \$-1 movwf 00411 \$-1 \$-1 00412 \$-1 \$-1 00413 \$-1 \$-1 00415 \$-1 \$-1 00416 \$-1 \$-1 00419 \$-1 \$-1 004	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00402 btfsc PORTB,CTS_INPUT 00405 btfss PIR1,TXIF 00406 fteturn 00406 return 00407 return 00409 ;Write to a location in the flash progra 00411 ;This routine returns in bank3 00412 00411 ;This routine returns in bank3 00412 00413 FlashWrite: Bank3 00415 00416 movlw 0x84 00416 00416 movlw 0x84 00418 00415 00411 movlw 0x84 00411 in the flash progra 00411 produce returns in bank3 00412 00411 movlw 0x84 00415 00411 movlw 0x84 00411 bit movlw 0x84 00411 movlw 0x85 00411 movlw 0x85 00411 movlw 0x84 00411 movlw 0x85 00411 movlw 0x85 00411 movlw 0x84 00411 movlw 0x84	<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00402 btfss PIR1,TXIF 00403 btfss PIR1,TXIF 00405 *1 00405 *1 00406 *1 00406 *1 00407 return 00407 **********************************</pre>	00396 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00401 SerialTransmit: Bank0 00402 SerialTransmit: Bank0 00403 btfsc PORTB, CTS_INPUT 00405 btfsc PIR1, TXIF 00406 return 00407 return 00407 return 00407 jwrite to a location in the flash progra 00410 ; Address in EEADRH and EEADR, data in EE 00411 ; This routine returns in bank3 00412 00413 FlashWrite: Bank3 00415 00416 movlw 0x84 00416 00416 movlw 0x84 00418 00416 movlw 0x84 00418 00411 movlw 0x84 00411 movlw 0x84 00410 movlw 0x84 00411 movlw 0x84 00411 movlw 0x84 00411 movlw 0x84 00411 movlw 0x85 00411 movlw 0x84 00411 movlw 0x84 00411 movlw 0x85 00411 movlw 0x84 00411 movlw 0x85 00411 movlw 0x84 00411 movlw 0x85 00411 movlw 0x85 00411 movlw 0x85 00411 movlw 0x84 00411 movlw 0x84	003395 ;	00395 ; Transmit byte in W register from USART 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT 00403 btfss PIR1, TXIF 00403 goto \$-1 00406 return 00406 return 00406 return 00407 return 00400 ; Write to a location in the flash progra 00410 ; Address in EEADRH and EEADR, data in EE 00411 ; This routine returns in bank3 00411 ; This routine returns in bank3 00412 movuf EECON1 00413 FlashWrite: Bank3 00414 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00417 movuf EECON1 00418 movuf EECON1 00419 movuf EECON1 00411 provuf EECON1 00410 movuf EECON1 00411 movuf EECON1	00395 ;7ransmit byte in W register from USART 00396 ;7rhis routine returns in bank0 00399 SerialTransmit byte in W register from USART 00399 SerialTransmit byte in W register from USART 00399 SerialTransmit byte in W register from USART 00399 SerialTransmit Bank0 00401 SerialTransmit: Bank0 00402 goto \$-1 00403 btfss PIRI, TXIF 00404 goto \$-1 00405 btfss PIRI, TXIF 00406 btfss PIRI, TXIF 00407 goto \$-1 00408 return 00400 in EE 00410 jMrite to a location in the flash program 00411 jThis routine returns in bank3 00411 jThis routine returns in bank3 00411 jThis movut \$00000 00411 movut \$00000 00412 movut \$00000 00413 movut \$000000 00416 movut \$000000 00411 movut \$000000 00412 movut \$0000000 00413 movut \$000000000000000000000000000000000000	00395 ;:rransmit byte in W register from USART 00398 ;Transmit byte in W register from USART 00399 serialTransmit: BankO 00401 btfsc <portb,cts_input< td=""> 00402 btfsc<portb,cts_input< td=""> 00403 btfss<pre>pIR1,TXIF 00404 btfss<pre>pIR1,TXIF 00405 btfss<pre>pIR1,TXIF 00406 btfss<pre>pIR1,TXIF 00407 btfss<pre>pIR1,TXIF 00408 return 00401 movwf 00403 return 00404 return 00401 pank3 00411 pAdress in EEADRH and EEADR, data in EB 00411 prite to a location in the flash program 00411 prits routine returns in bank3 00411 prits routine returns in bank3 00411 prove 00412 movvilw 00413 movvil< eECON1</pre></pre></pre></pre></pre></portb,cts_input<></portb,cts_input<>	00395
00397;Transmit byte in W register from USART00398;This routine returns in bank0003990040000401btfsc PORTB,CTS_INPUT ;check C00401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btffss PIR1,TXIF ;check t00404goto \$-100405teturn00406movwf TXREG00407return00407return00409;Write to a location in the flash program memory00410;Mrite in BEADRH and EEADR, data in EEDATH and00411;This routine returns in bank300412rouving EECON100413flashWrite: Bank300416movvif EECON100416movvif EECON100417movvif EECON100418movvif EECON100419movvif EECON200410bsf movvif EECON200411bsf movvif EECON100412movvif EECON100413bsf movvif EECON100416movvif EECON100411bsf movvif EECON1	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00402goto01403btffsc00404goto00405btffss01406poto00407return00407return00407return00407return00407send00407send00407send00407send00407return00407send00410imovwfimovwfbank300411imovimovwfbank300412imov00413flashWrite:00416movvf00416movvf00417imov00418imov/m00419imov00410imov/m00411imov/m00412imov/m00412imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov/m00411imov	00396;	000395;::::::::::::::::::::::::::::::::::::	003950039500396;Transmit byte in W register from USART00398;This routine returns in bank000398;This routine returns in bank000400SerialTransmit: Bank000401btfsc00402goto00403s-100404btfsc00404poto00405s-100406s-100407poto00407strain00408strain00409strain00407strain00408strain00409strain00409strain00407strain00408strain00409strain00409strain00409strain00409strain00409strain00409strain00410strain00411strain00411strain00412movulw00413strain00414strain00414strain00415movulw00416movulw00411strain00412movulw00412movulw00413movulw004140041400415movulw00415movulw00416movulw00417movulw00418movulw00419movulw00419movulw00420movulw00421movulw00421<	003950039500396;Transmit byte in W register from USART00398;Transmit byte in W register from USART00399;Transmit byte in W register from USART00399;Fransmit byte in W register from USART00390serialTransmit: Bank000401btfss00402goto00403btfss00404s-100403btfss00404goto00405s-100406s-100407return00408s-100409sreturn00409;mrite to a location in the flash program memory00410;Address in EEADRH and EEADR, data in EEDATH and00411;This routine returns in bank300413FlashWrite: Bank300414movufw00415movufw00416movufw00417movufw00418movufw00419stactorin00411pank300411movufw00412movufw00413flashWrite: Bank300414secon100415movufw00416movufw00411movufw00412movufw00413movufw00414secon100414movufw00415movufw00416movufw00417movufw00418movufw00419movufw00419movufw00419movufw00411movufw </td <td>00395;</td> <td>00395:</td>	00395;	00395:
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00398 ;This routine returns in bank0 00401 SerialTransmit: Bank0 00402 9 00403 btfss PIR1,TXIF ;check t 00405 5-1 00405 7-1 00406 00406 return move TXREG ;transmi 00407 00407 return 00407 00407 return move return 00407 00401 jthis routine returns in bank3 00411 jThis routine returns in bank3 00412 00414 move EEADRH and EEADR, data in EEDATH and 00413 FlashWrite: Bank3 00418 00414 move EECON1 00416 00414 move EECON1 00416 00414 move EECON1 00419 move EECON1 00410 move EECON1 00419 move EECON1 00419 move EECON1 00419 move EECON1 00410 move EECON1	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;change00400SerialTransmit: Bank000401SerialTransmit: Bank000402goto01403btfsc PORTB,CTS_INPUT00404goto00405btffss PIR1,TXIF00406sgoto00407movwf00407return00407return00409%rite to a location in the flash program memory00410;Address in ERADRH and ERADR, data in EEDATH and00411;This routine returns in bank300412movVM00413FlashWrite: Bank300416movVM00417movVM00418movVM00419movVM00410movVM00410movVM00411returns in bank300412movVM00413movVM00416movVM00419movVM00419movVM00419movVM00419movVM00419movVM00419movVM00420movVM00420movVM00420movVM00420movVM00420movVM00420movVM00420movVM00420movVM00420movVM00420movVM00420movVM00420movVM00420movVM00420movVM0	00396;	00395;Transmit byte in W register from USART00397;Transmit byte in W register from USART00399;This routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btffsc PORTB,TXIF00404return00405return00406serialTransmit00407return00408return00409;Write to a location in the flash program memory00410;Address in EEADRH and EEADR, data in EEDATH and00411;This routine returns in bank300412routine returns in bank300413FlashWrite: Bank300414movuf EECON100415movuf EECON100416movuf EECON100417returns in bank300418movuf EECON100419returns in bank300410returns in bank300411returns in bank300412movuf EECON100413returns in bank300414returns in bank300415returns in bank300416returns in bank300417returns in bank300418returns in bank300419returns in bank300419returns in bank3004117returns in bank3004118returns in bank300412returns in bank300413returns in bank300419returns in bank300419<	003950039500396;Transmit byte in W register from USART00398;This routine returns in bank000398;This routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401Btffsc PORTB,CTS_INPUT ;check C00402goto \$-100403transmit00404goto \$-100405transmit00406return00407seturn00408seturn00409;Write to a location in the flash program memory00409;Write to a location in the flash program memory00411;This routine returns in bank300413FlashWrite: Bank300413rouvef EECON100413movuf EECON100419movuf EECON100420movuf EECON1<	003950039500396;This routine returns in bank000398;This routine returns in bank0003990040000400SerialTransmit: Bank000401btfsc00402goto00403goto00404s-100404serialTransmit: Bank000405btfss00406s-100407goto00407return00408serialTransmit: Bank000407serialTransmit: Bank300407serialTransmit: Bank300408serialTransmit: Bank300409jmrite to a location in the flash program memory00410jAddress in EEADRH and EEADR, data in EEDATH and00411jThis routine returns in bank300412could00413show f EECON100419movuf EECON100419movuf EECON100419movuf EECON100419movuf EECON100419movuf EECON100419movuf EECON100420movuf EECON1	00395;	00395:
<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check t 00402 btfss PTR1,TXIF ;check t 00406 \$-1 00406 *1 00406 return 00407 movyf TXREG ;transmi 00407 movyf TXREG ;transmi 00408 ;rrenerent in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00413 flashWrite: Bank3 00415 movVf EECON1 00418 movWf EECON1 00418 movWf EECON2 00419 movVf EECON2 00419 movVf EECON2 00410 movVf EECON2 00410 movVf EECON2</pre>	00397Transmit byte in W register from USART00398This routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401Btfsc00402SerialTransmit: Bank000403Btfss00404Btfss00404Btfss00405Btfss00406S-100407Btfss00407SerialTransmit: Batk1, TXIF00407Serial movwf00407Serial move00407Serial move00407Serial move00407Serial move00407Serial move00407Serial move00407Serial move00407Serial move00407Serial move00407Serial move00411Serial move00411Serial move00412Serial move00413FlashWrite: Bank300414Serial move00415Serial move00416Serial move00417Serial move00418Serial move00419Serial move00410Serial move00411Serial move00412Serial move00413Serial move00414Serial move00415Serial move00416Serial move00417Serial move00418Serial move00419Serial moveSerial moveSerial moveSerial moveSerial move <td>00396;</td> <td>00395 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 900402 btfss PIR1,TXIF ; check t 900403 btfss PIR1,TXIF ; check t 00406 return 00406 return 00406 return 00407 return 00407 return 00400 ; write to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00412 00411 ; This routine returns in bank3 00415 00411 movVf EECON1 00416 movVf EECON1 00416 movVf EECON1 00417 00416 movVf EECON1 00417 00416 movVf EECON1 00417 movVf EECON1 00419 movVf EECON2 00419 movVf EECON2</td> <td>00395;::::::::::::::::::::::::::::::::::::</td> <td>003950039500396;This routine returns in bank000398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00401btfsc00402goto00403transmit: Bank000404btfsc00404poto00405transmit: Bank000406s-100407goto00407serialTransmit: Bank000408serialTransmit: Bank100407serial00408return00409serial00409serial00401serial00403serial00404serial00404serial00405serial00406serial00407serial00408serial00409serial00410serial00411serial00412serial00413serial00414serial00414serial00415serial00416serial00417movum00418serial00419serial00419serial00419serial00419serial00419serial00419serial00419serial00419serial00419serial00419serial00419serial00419<td>00395;====================================</td><td>00395;</td></td>	00396;	00395 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 900402 btfss PIR1,TXIF ; check t 900403 btfss PIR1,TXIF ; check t 00406 return 00406 return 00406 return 00407 return 00407 return 00400 ; write to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00412 00411 ; This routine returns in bank3 00415 00411 movVf EECON1 00416 movVf EECON1 00416 movVf EECON1 00417 00416 movVf EECON1 00417 00416 movVf EECON1 00417 movVf EECON1 00419 movVf EECON2 00419 movVf EECON2	00395;::::::::::::::::::::::::::::::::::::	003950039500396;This routine returns in bank000398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00401btfsc00402goto00403transmit: Bank000404btfsc00404poto00405transmit: Bank000406s-100407goto00407serialTransmit: Bank000408serialTransmit: Bank100407serial00408return00409serial00409serial00401serial00403serial00404serial00404serial00405serial00406serial00407serial00408serial00409serial00410serial00411serial00412serial00413serial00414serial00414serial00415serial00416serial00417movum00418serial00419serial00419serial00419serial00419serial00419serial00419serial00419serial00419serial00419serial00419serial00419serial00419 <td>00395;====================================</td> <td>00395;</td>	00395;====================================	00395;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 .This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00405 return 00406 s-1 ;transmi 00407 return 00407 return 00401 ;fie to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00415 movuf BARAS ;change 00416 movuf BARAS ;change 00418 movuf EECON1 00418 movuf EECON1 00419 movuf EECON2 00419 movuf EECON2 00419 movuf EECON2 00419 movuf EECON2	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402Butfsc00403SerialTransmit: Bank000404goto00405butfss00405Butfss00406s-100407serialTransmit: Bank100407return00407return00407return00407serial butfss00407return00407serial bank300410fddress in BEADRH and EEADR, data in EEDATH and00411fThis routine returns in bank300412flashWrite: Bank300413flashWrite: Bank300416movUw00417movUw00418movUw00419movUw00419movUw00419movUw00419movUw00410movUw00419movUw00419movUw00419movUw00419movUw00410movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw	00396;	00395;Transmit byte in W register from USART00397;Transmit byte in W register from USART00399;This routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btffss PIR1,TXIF00404second00405movwf TXREG00406second00407return00408return00409;Write to a location in the flash program memory00410;Address in EBADRH and EBADR, data in EEDATH and00411;This routine returns in bank300412movuf BEADR00413FlashWrite: Bank300416movuf BECON100416movuf BECON100416movuf BECON100417movuf BECON100418movuf BECON200419movuf BECON200410movuf BECON200410movuf BECON200410movuf BECON2	00395 ;::::::::::::::::::::::::::::::::::::	00395;00396;00397;00398;00398;00399;00399;00399;00399;00399;00400SerialTransmit: Banko00401btfsc00402btfsc00403btfsc00404goto00404\$-100405\$-100406\$-100407poto00408return00409\$-100409\$-100407\$-100408return00409\$-100409\$-100401\$-100407\$-100408\$-100410\$-100410\$-100411\$-100412\$-100412\$-100413\$-100415\$-100416\$-100416\$-100417\$-100418\$-100419\$-100419\$-100411\$-100411\$-100412\$-100413\$-100416\$-100416\$-100417\$-100418\$-100419\$-100419\$-100419\$-100419\$-100419\$-100419\$-100419\$-100419\$-1<	00395;00396;Transmit byte in W register from USART00397;Transmit byte in W register from USART00398;This routine returns in bank0003990040000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check t00402goto \$-100403poto \$-100404poto \$-100405poto \$-100406return00407poto \$-100407return00408s-100409;write to a location in the flash program memory00410;Address in EEADRH and EEADR, data in EEDATH and00411;This routine returns in bank300412movuf EECON100413FlashWrite: Bank300416movuf EECON100418movuf EECON100419movuf EECON200419movuf EECON200410movuf EECON200419movuf EECON2	00395:
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 btfss PIRL,TXIF ;check t 9000 \$-1 00405 btfss PIRL,TXIF ;check t 9000 \$-1 00405 return 00406 return 00407 return 00409 ;Mrite to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 movuf Bank3 00412 movuf Bank3 00413 FlashWrite: Bank3 00414 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00416 movuf EECON1 00417 ;do time 00419 movuf EECON2 00419 movuf EECON2 00419 movuf EECON2	003397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402SerialTransmit: Bank000403SerialTransmit: Bank000404Goto00403Dtffss00404SerialTransmit: Bank100405SerialTransmit: Bank100406SerialTransmit: Bank300407Neuvef TXREG00407seturn00408seturn00409frante to a location in the flash program memory00410fradress in EEADRH and EEADR, data in EEDATH and00411frhis routine returns in bank300412PlashWrite: Bank300413FlashWrite: Bank300414MovVMf EECON100415MovVMf EECON100416MovVMf EECON100417MovVMf EECON200418MovVMf EECON200419MovVMf EECON2	00396;	00395; Transmit byte in W register from USART00396; Transmit byte in W register from USART00399; This routine returns in bank000399serialTransmit: Bank000400serialTransmit: Bank000401goto00402btfss00403strintransmit: Bank000404goto00405btfss00406s-100407goto00407return00408return00409jWrite to a location in the flash program memory00410jAddress in EEADRH and EEADR, data in EEDATH and00411jThis routine returns in bank300412movuf EECON100413flashWrite: Bank300416movuf EECON100419movuf EECON100419movuf EECON200419movuf EECON200419movuf EECON2	00395003967777999 </td <td>00395;00396;00397;00398;00398;00399;00399;00399;00399;00399;00399;00399;00399;00399;00400serialTransmit:00401btfsc00402goto00403btffsc00404s-100405poto00406;00407return00407s-100408;00409;00409;00409;00410;inite to a location in the flash program memory00411;inite to a location in the flash program memory00412;00413;inite seank3;00414;inite seank300415;00416movuf00417;00418;00419;00419;00411;00415movuf00416;00417;00418;00419;00419;00419;00419;00419;00419;00419;00419;00419;00419;00419;00</td> <td>00395;00396;Transmit byte in W register from USART00398;This routine returns in bank000399;Change00400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check c00402goto \$-100403btffsc PORTB,CTS_INPUT ;check c00403btffsc PORTB,CTS_INPUT ;check c00404goto \$-100405btffsc PORTB,CTS_INPUT ;check c00406goto \$-100407return00408s-100409incrementance00409stal00401return00410shdress in EEADRH and EEADR, data in EEDATH and00411ins routine returns in bank300412could bank300413return00414movuf EECON100415movuf EECON100416movuf EECON100417movuf EECON200418movuf EECON200419movuf EECON200410movuf EECON200410movuf EECON2</td> <td>00395:</td>	00395;00396;00397;00398;00398;00399;00399;00399;00399;00399;00399;00399;00399;00399;00400serialTransmit:00401btfsc00402goto00403btffsc00404s-100405poto00406;00407return00407s-100408;00409;00409;00409;00410;inite to a location in the flash program memory00411;inite to a location in the flash program memory00412;00413;inite seank3;00414;inite seank300415;00416movuf00417;00418;00419;00419;00411;00415movuf00416;00417;00418;00419;00419;00419;00419;00419;00419;00419;00419;00419;00419;00419;00	00395;00396;Transmit byte in W register from USART00398;This routine returns in bank000399;Change00400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check c00402goto \$-100403btffsc PORTB,CTS_INPUT ;check c00403btffsc PORTB,CTS_INPUT ;check c00404goto \$-100405btffsc PORTB,CTS_INPUT ;check c00406goto \$-100407return00408s-100409incrementance00409stal00401return00410shdress in EEADRH and EEADR, data in EEDATH and00411ins routine returns in bank300412could bank300413return00414movuf EECON100415movuf EECON100416movuf EECON100417movuf EECON200418movuf EECON200419movuf EECON200410movuf EECON200410movuf EECON2	00395:
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 00403 btfss PTR1,TXIF ;check t 00406 \$-1 00405 btfss PTR1,TXIF ;check t 00406 return 00407 return 00407 return 00407 p;Write to a location in the flash program memory 00410 ;Mrite to a location in the flash program memory 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00415 movuf EEQDN1 00416 movuf EECON1 00418 movuf EECON1 00418 movuf EECON1 00419 movuf EECON2 00419 movuf EECON2	00337;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00402SerialTransmit: Bank000403Boto00404goto00404btfss00405btfss00406\$-100407goto00407movwf00407return00407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100408\$-100409\$Mrite to a location in the flash program memory00411\$Mrite to a location in the flash program memory00412\$-100413\$-100415\$-100416\$-000417\$-100418\$-100419\$-100419\$-100416\$-100417\$-100418\$-100419\$-100419\$-100416\$-100417\$-100418\$-100419\$-100419\$-100419\$	<pre>00396 ;</pre>	00395;Transmit byte in W register from USART00396;Transmit byte in W register from USART00399;This routine returns in bank000399serialTransmit: Bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT; check c00402goto00403s-100404soto00405treturn00406s-100407return00407sell00408sell00409wovwf00409sell00409sell00409sell00401sell00407return00408sell00410sell00411sell00412movuf00413flash00414movuf00414movuf00415movuf00416movuf00417movuf00418movuf00419movuf00419movuf00411movuf00419movuf00419movuf00419movuf00419movuf004117movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf00419movuf004	00395 ;::::::::::::::::::::::::::::::::::::	00395;00396;00397;00398;00398;00399;00399;00399;00399;00399;00399;00399;00399;00399;00400serialTransmit:00401btfsc00402\$-100403btfsc00403btfss00404\$-100405btfss00406\$-100407\$-100408\$-100409\$\$return00409\$\$return00410\$\$\$00411\$\$\$00412\$\$\$00413\$\$\$00414\$\$\$00411\$\$\$00412\$\$\$00413\$\$\$00414\$\$\$00415\$\$\$00416\$\$\$00417\$	00395 ;	00395:
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 .This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfss PTR1,TXIF ;check t 00403 btfss PTR1,TXIF ;check t 00405 btfss PTR1,TXIF ;check t 00406 *-1 ;transmi 00407 return agoto \$-1 ;transmi 00407 return and EEADR, data in EEDATH and 00410 ;Mrite to a location in the flash program memory 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00415 movWf EECON1 00416 movWf EECON1 00416 movWf EECON1 00417 (otime returns in bank3 00418 movWf EECON1 00419 movWf EECON1 00419 movWf EECON1 00410 movWf EECON2 00419 movWf EECON2 00419 movWf EECON2	00337;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT;check C00402goto00403btfss<pre>PIRL,TXIF00404goto00405btfss<pre>prest, TXREG00406return00407return00407return00407for \$-100407return00407return00407return00407return00407return00407return00407return00407return00407return00407return00407return00407return00408return00407return00409return00401return00411return00412return00413returns in bank300416rovlw00416rovlw00417rovlw00418rovlw00419rovlw00417rovlw00418rovlw00417rovlw00418rovlw00419rovlw00419rovlw00410rovlw00410rovlw00411rovlw00412rovlw00412rovlw00413rovlw00418rovvlw<</pre></pre></pre>	00396;	00395;Transmit byte in W register from USART00397;Transmit byte in W register from USART00398;This routine returns in bank000399containt byte in W register from USART00399containt byte in W register from USART00399containt byte in W register from USART00399containt byte in W register from USART00309serialTransmit: Bank000400btfsc00401btfsc00403goto00404s-100404s-100405s-100406s-100407return00407s-100408s-100409synthe to a location in the flash program memory00410sddress in EEADRH and EEADR, data in EEDATH and00411state in bank300412contine returns in bank300413flashWrite: Bank300414movuf EECON100415movuf EECON100416movuf EECON100418movuf EECON200419movuf EECON200419movuf EECON200419movuf EECON200419movuf EECON2	003950039500396;Transmit byte in W register from USART00398;This routine returns in bank0003990040000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btffsc PORTB,CTS_INPUT ;check C00403goto \$-100404goto \$-100405novwf TXREG00406stal00407stal00408stal00409stal00409stal00401return00407stal00408stal00409stal00401stal00401stal00402stal00403stal00404stal00404stal00407stal00408stal00410stal00411stal00411stal00412stal00413stal00413stal00414movuf00415movuf00416movuf00417movuf00418movuf00419movuf00416movuf00417movuf00418movuf00419movuf00419movuf00410movuf00415movuf00416movuf00417movuf00418movuf00419movuf00419movuf <td>00395;00396;00397;00398;00398;00399;00399;00399;00399;00399;00399;00399;00399;00399;00400serialTransmit: Bank000401btfsc00402spoto00403btffsc00404spoto00405stra00406spoto00407movwf00407return00408return00409;00409;00410;in EEADRH and EEADR, data in EEDATH and00411;in the flash program memory00412;in the flash program memory00413;in the flash program memory00413;in the flash program memory00415;in the flash program memory00411;in the flash program memory00412;in the movulw0x84in the movulwin the flash program memory00415;in the movulw0x84in the movulwin the flash program memory00415;in the movulw0x84in the movulwin the flash program memory00416;00417;00418;00419;</td> <td>00395;</td> <td>00395</td>	00395;00396;00397;00398;00398;00399;00399;00399;00399;00399;00399;00399;00399;00399;00400serialTransmit: Bank000401btfsc00402spoto00403btffsc00404spoto00405stra00406spoto00407movwf00407return00408return00409;00409;00410;in EEADRH and EEADR, data in EEDATH and00411;in the flash program memory00412;in the flash program memory00413;in the flash program memory00413;in the flash program memory00415;in the flash program memory00411;in the flash program memory00412;in the movulw0x84in the movulwin the flash program memory00415;in the movulw0x84in the movulwin the flash program memory00415;in the movulw0x84in the movulwin the flash program memory00416;00417;00418;00419;	00395;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 .This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check t 9000 \$-1 00403 btfss PIR1,TXIF ;check t 9000 \$-1 00405 return 00407 return 00407 return 00407 ;ransmi 00409 ;Write to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 00413 FlashWrite: Bank3 00414 movuw f EEADR, data in EEDATH and 00415 movuw f EEADR, data in EEDATH and 00416 movuw f EEADR, data in EEDATH and 00416 movuw f EECON1 00416 movuw f EECON2 00419 movuw f EECON2 00419 movuw f EECON2 00419 movum f EECON2	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402Btfsc <portb,cts_input;check c<="" td="">00403btffsc<portb,cts_input;check c<="" td="">00404goto \$-100405btffss<pir1,txif< td="">00406btffss<pir1,txif< td="">00407return00407return00407return00407for \$-100407return00407for \$-100407return00407for \$-100407return00407return00407return00407for \$-100407return00407return00407for \$-100407return00410for \$-100411for \$-100412for \$-100413FlashWrite: Bank300414for \$-100415movUw00416movUw00417for \$-100418movUw00418movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw00419movUw<!--</td--><td>00396;</td><td>00395;rransmit byte in W register from USART00397;rransmit byte in W register from USART00398;rhansmit byte in W register from USART00399serialTransmit: Banko00400SerialTransmit: Banko00401btfsc<pre>poRTB,CTS_INPUT;check c00402goto00403transmit: Banko00404btfss<pre>prnd,TXIF00402btfss<pre>prnd,TXIF00403btfss<pre>prnd,TXIF00404sout00405cutin00406s-100407movwf00407return00408return00409jwrite to a location in the flash program memory00410jmrite to a location in the flash program 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EECON2</td><td>00395</td></pir1,txif<></pir1,txif<></portb,cts_input;check></portb,cts_input;check>	00396;	00395;rransmit byte in W register from USART00397;rransmit byte in W register from USART00398;rhansmit byte in W register from USART00399serialTransmit: Banko00400SerialTransmit: Banko00401btfsc <pre>poRTB,CTS_INPUT;check c00402goto00403transmit: Banko00404btfss<pre>prnd,TXIF00402btfss<pre>prnd,TXIF00403btfss<pre>prnd,TXIF00404sout00405cutin00406s-100407movwf00407return00408return00409jwrite to a location in the flash program memory00410jmrite to a location in the flash program memory00411jrhis routine returns in bank300412movuk00413FlashWrite: Bank300414movuk00415movuk00416movuk00418movuk00418movuk00419jrdises in EEADRH and EEADR, data in EEDATH and00411jrdises in EEADRH and EEADR, data in EEDATH 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00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00401 SerialTransmit: Bank0 00402 dot \$-1 00403 btfss PIRI,TXIF ;check t goto \$-1 00405 return 00405 return 00407 return 00407 return 00409 ;Write to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 PlashWrite: Bank3 00413 FlashWrite: Bank3 00414 mov/w fecON1 00416 mov/w fecON1 00417 mov/w fecON1 00418 mov/w fecON1 00418 mov/w fecON1 00410 mov/w fecON2 00410 mov/w fecON2	00337;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00402SerialTransmit: Bank000403SerialTransmit: Bank000404goto00403btfss00404goto00404btfss00405btfss00406\$-100407goto00407movwf00407return00407return00407frame00407frame00407frame00407frame00407frame00407frame00407frame00408frame00411frame00411frame00412frank300412frank300413frank300416movuf00416movuf00416movuf00416movuf00417frange00418movuf00419movuf00410france00411france00411france00411france00412frank300412frank300413frank300416frank300417frank300417frank300418frank300419frank300411frank300412frank3	00396 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 00402 btfsc PORTB, CTS_INPUT ; check C 00403 btfss PIRI, TXIF ; check t 00405 btfss PIRI, TXIF ; check t 00406 return 00406 return 00407 return 00409 ; write to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00412 movum 0x84 ; change 00414 movum 0x84 ; change 00415 movum 0x84 ; change 00416 movum 0x84 ; change 00417 movum 0x84 ; change 00418 movum 0x84 ; change 00419 movum 0x84 ; change 00410 movum 0x85 ; change 00410 movum 0x85 ; change 00410 movum 0x85 ; change	003350033601397700397700398700399700399004000039900401004010040200402004030040300404004040040400405004050040600406004070040700407004087004097004097004107004117004120041200413004130041400416004150041500416700417700418700419700410700412004130041400416004150041600417004170041800418004190041900419004100041000410004110041100412004120041300413004140041900419004190041900410004100041000410004110041200412<	00395;Transmit byte in W register from USART00398;This routine returns in bank000398;This routine returns in bank000399SerialTransmit: Bank000401BerialTransmit: Bank000402BerialTransmit: Bank000403btffsc00404btffsc00405btffsc00406\$-100407stal00407movwf00407return00407return00407stal00407stal00407stal00407return00407stal00407return00407stal00407stal00407stal00407stal00407stal00410stal00411stal00412stal00412movuf00413stal00415movuf00416movuf004170x8400418stal00419movuf00410stal00410stal00411stal00412movuf00412movuf00413stal00416movuf004170x8400418movuf00419stal00410stal00410stal00411stal00412stal00413stal00416stal00417stal <t< td=""><td>00395;Transmit byte in W register from USART00396;Transmit byte in W register from USART00398;This routine returns in bank000399SerialTransmit: Bank000401SerialTransmit: Bank000402SerialTransmit: Bank000403btfsc PORTB,CTS_INPUT ;check c00404goto \$-100405btfss PIR1,TXIF00406seturn00407seturn00407seturn00407seturn00409yrite to a location in the flash program memory00410jMrite to a location in the flash program memory00411jThis routine returns in bank300412movuf EEADR, data in EEDATH and00413flashWrite: Bank300413movuf EECON100418movuf EECON100410movuf EECON100413movuf EECON100414movuf EECON200415movuf EECON200416movuf EECON200417movuf EECON200418movuf EECON2</td><td>00395 ;</td><td>00395:</td></t<>	00395;Transmit byte in W register from USART00396;Transmit byte in W register from USART00398;This routine returns in bank000399SerialTransmit: Bank000401SerialTransmit: Bank000402SerialTransmit: Bank000403btfsc PORTB,CTS_INPUT ;check c00404goto \$-100405btfss PIR1,TXIF00406seturn00407seturn00407seturn00407seturn00409yrite to a location in the flash program memory00410jMrite to a location in the flash program memory00411jThis routine returns in bank300412movuf EEADR, data in EEDATH and00413flashWrite: Bank300413movuf EECON100418movuf EECON100410movuf EECON100413movuf EECON100414movuf EECON200415movuf EECON200416movuf EECON200417movuf EECON200418movuf EECON2	00395 ;	00395:
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check c 00402 goto \$-1 00405 btfss PTR1,TXIF ;check t 00406 set movwf TXREG ;transmi 00407 return 00406 return 00407 return 00406 ;change 00408 ;	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT;check C00402goto01403btfss<pre>PIRL,TXIF00404goto00405btfss<pre>pred00406s-100407goto00407return00407return00407return00407return00407return00407serialTransmit00407return00407return00407return00407return00407return00407return00407return00407return00407return00408return00409return00410return00411return00411returns in bank300412movuk00413returns in bank300415movuk004160041700417movuk00418movuk00417movuk00417movuk00418movuk00417movuk00417movuk00418movuk00417movuk00417movuk00418return00417movuk00418return00419return00417retur</pre></pre></pre>	00396 ;	00395;rransmit byte in W register from USART00397;rransmit byte in W register from USART00398;rhis routine returns in bank000399serialTransmit: Bank000400SerialTransmit: Bank000401btfsc <pre>poRTB,CTS_INPUT;check c00402goto00403btffsc<pre>prR1,TXIF00404s-100405btffsc<pre>prR1,TXIF00406return00407return00407return00408return00409return00409return00410return00411return00412return00413flash program memory00414ox4100415returns in bank300416returns in bank300417returns in bank300418returns in bank300419returns in bank300411returns in bank300412returns in bank300413returns in bank300416rov1w00416rov1w00417returns in bank300418returns in bank300419returns in bank300415returns in bank300416rov1w00417returns in bank300418returns in bank300419returns in bank300416returns in bank300417returns in bank300418returns in bank300419returns in bank300416returns in ba</pre></pre></pre>	00395;Transmit byte in W register from USART00396;Transmit byte in W register from USART00398;This routine returns in bank0003990040000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btffss PTR1,TXIF ;check t00404goto \$-100405return00406return00407return00407return00408return00409jwrite to a location in the flash program memory00410jAddress in EEADRH and EEADR, data in EEDATH and00411jThis routine returns in bank3004120041300413PlashWrite: Bank300416movWf EECON1004170041800418movWf EECON1004190041900415movWf EECON10041600412004170041600418movWf EECON100418movWf EECON200410004130041000416004110041600411movWf EECON1004117movWf EECON2004117movWf EECON2	00395;Transmit byte in W register from USART00396;This routine returns in bank000398;This routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402SerialTransmit: Bank000403SerialTransmit: Bank000404goto00405btfss<	00395;rransmit byte in W register from USART00397;Transmit byte in W register from USART00398;This routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401Btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btffss PIRI,TXIF00404btffss PIRI,TXIF00405btffss PIRI,TXIF00406soto \$-100407return00408return00409;Mrite to a location in the flash program memory00410;Address in EEADRH and EEADR, data in EEDATH and00411;This routine returns in bank300412returns in bank300413flashWrite: Bank300415movUw 0x8400416movUw 0x84004170x41800418movUw 0x84004190x41400415movUw 0x85004160041200418movUw 0x5500418movUw 0x55004170x41800418movUw 0x5500418movUw 0x5500417movUw 0x5500418movUw 0x5500418movUw 0x5500410movUw 0x5500410movUw 0x5500411movUw 0x5500412movUw 0x5500413movUw 0x5500413movUw 0x5500413movUw 0x5500413movUw 0x5500413movUw 0x5500413movUw 0x5500413 <td>00395</td>	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 .This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00406 return 00407 return 00407 return 00407 jwrite to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00415 movUw 0x84 ;enable 00416 movUw 0x84 ;enable 00417 movUw 0x55 ;do time 00418 movWf EECON1	00337;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT;check C00402goto \$-100403btfss PIRL,TXIF00404goto \$-100405return00406return00407return00407return00407return00407s-100407return00407return00407return00407return00407return00407return00407return00408return00401return00410return00411return7return00412returns in bank300413returns in 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00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT ;check c goto \$-1 00403 btfss PIRI,TXIF ;check t goto \$-1 00405 return 00406 return 00406 return 00407 return 00407 return 00410 ;Madress in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3 00411 movwf EECON1 00415 movWf EECON1 00417 movwf EECON1 00417 movVf 0x55 movIw 0x55 movIm	003397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402Butfsc <portb,cts_input;check c<="" td="">00403goto00403Butfss<pir1,txif< td="">00404goto00404butfss<pir1,txif< td="">00405butfss<pir1,txif< td="">00406s-100407goto00407movwf<txreg< td="">00407return00407frammi00407frammi00407frammi00407frammi00407frammi00407frammi00407frammi00407frammi00408frammi00407frammi00407frammi00408frammi00408frammi00407frammi00410frammi00411frammi00412frammi00412frammi00413frammi00416movuf00416movuf00417frammi00417frammi00417frammi00418frammi00419frammi00410frammi00411frammi00411frammi00411frammi00411frammi00411frammi00411frammi00411frami00411<td>00396 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 00403 btfsc PORTB, CTS_INPUT ; check C 00403 btfss PIRI, TXIF ; check t 00405 btfss PIRI, TXIF ; check t 00405 return 00406 return 00406 return 00407 jone flash program memory 00408 j return in the flash program memory 00410 j Address in EEADRH and EEADR, data in EEDATH and 00415 movuf Bank3 00415 movuf Bank3 00415 00416 movuf Bank3 j change 00416 movuf Bank3 j change</td><td>0039500396013977003987003997003997003990040000399004010040100402004020040300403004040040400404004050040500406004060040700407004070040870040970040970040970041070041170041200411700412004130041500416004167004177004187004197004107004117004120041200413004150041600416004170041700418004190041900410004100041000411700412004120041300415004160041700417004170041800419004100041000410004110041100411<td>00395;Transmit byte in W register from USART00396;Transmit byte in W register from USART00398;This routine returns in bank0003990040100401Betfsc PORTB, CTS_INPUT; 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Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT; check C 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00406 return 00406 return 00406 return 00406 return 00406 return 00407 jarte to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00412 00411 movwf EECON1 00416 movvf EECON1 00416 movvf EECON1 00417 jdt ime</td> <td>00395</td>	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT; check C 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00406 return 00406 return 00406 return 00406 return 00406 return 00407 jarte to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00412 00411 movwf EECON1 00416 movvf EECON1 00416 movvf EECON1 00417 jdt ime	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfss PTR1,TXIF ;check c 00403 btfss PTR1,TXIF ;check t 00405 btfss PTR1,TXIF ;check t 00406 *-1 ;rransmi 00406 return movwf TXREG ;transmi 00407 return 00406 ;transmi 00407 jtransmi return novvf data in EEDATH and 00411 ;This routine returns in bank3 00412 00413 flashWrite: Bank3 00415 movVf BANK 0X84 ;enable 00415 00415 movVf BANK 0X84 ;enable 00416 00417 movVf BECON1 0X85 ;folange	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000309serialTransmit: Bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btfss PIRL,TXIF00404goto \$-100405return00406return00407return00407return00407s-100407return00407s-100407return00407s-100407return00407return00407return00407s-100408return00407return00407return00408s-100407return00407s-100408s-100409smovwf1s-100409smovwf1s-100411smovus1s-100412s-100413s-100415movus00416004150041600416004170041600417004150041700415004170041500417s-100417s-100417s-100417s-100417s-100417s-100417s-100417s-1 <td>00396 ;</td> <td>003950039670039770039770039870039970039900400004000040100401004020040300403004040040400405004050040600406004070040700408700409700409700409700410700411770041200411700412004137004150041470041470041570041600411770041200413700415004150041600417004170041870041970041600417004170041700417004170041700417004187004197004160041700417004170041700417004170041700417004170041700417</td> <td>00395;rransmit byte in W register from USART00396;rransmit byte in W register from USART00398;rhis routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btffss PIR1,TXIF00404goto \$-100405return00406return00407return00407return00408return00409jmrite to a location in the flash program memory00410jddress in ERADRH and ERADR, data in EEDATH and00411jAddress in ERADRH and EEADR, data in EEDATH and00413flashWrite: Bank300415movWf BEAON100416movWf BEAON100417004180041700419004170041900417004160041700419004170041000416movUw 0x550041700410004170041000417<</td> <td>00395;00396;00397;00398;7This routine returns in bank000399;00400SerialTransmit: Bank000401btfsc00402srialTransmit: Bank000403serialTransmit: Bank000404btfsc00403btfss00404btfsc00404serialTransmit: Bank000405btfss00406serialTransmit: Bank1, TXIF00407serial00407serial00407serial00407serial00407serial00407serial00407serial00407serial00407serial00407serial00407serial00408serial1powwf1serial00407serial00408serial1serial00407serial00408serial1serial00409serial1serial00410serial1serial00411serial1serial00412serial00413serial00415serial00416serial00417serial00418serial00419serial00416serial00416serial00416serial00416</td> <td>00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 serialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check c 00402 doto \$-1 00405 btfss PIRL, TXIF ; check t 00406 return 00406 return 00406 return 00407 return 00407 in the flash program memory 00409 ; Mrite to a location in the flash program memory 00401 ; This routine returns in bank3 00411 ; This routine returns in bank3 00415 movWf EEADR, data in EEDATH and 00415 movWf EECON1 00416 movWf EECON1 00416 movWf EECON1 00417 ; do time 00417 movHv 0x55 ; do time</td> <td>00395</td>	00396 ;	003950039670039770039770039870039970039900400004000040100401004020040300403004040040400405004050040600406004070040700408700409700409700409700410700411770041200411700412004137004150041470041470041570041600411770041200413700415004150041600417004170041870041970041600417004170041700417004170041700417004187004197004160041700417004170041700417004170041700417004170041700417	00395;rransmit byte in W register from USART00396;rransmit byte in W register from USART00398;rhis routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btffss PIR1,TXIF00404goto \$-100405return00406return00407return00407return00408return00409jmrite to a location in the flash program memory00410jddress in ERADRH and ERADR, data in EEDATH and00411jAddress in ERADRH and EEADR, data in EEDATH and00413flashWrite: Bank300415movWf BEAON100416movWf BEAON100417004180041700419004170041900417004160041700419004170041000416movUw 0x550041700410004170041000417<	00395;00396;00397;00398;7This routine returns in bank000399;00400SerialTransmit: Bank000401btfsc00402srialTransmit: Bank000403serialTransmit: Bank000404btfsc00403btfss00404btfsc00404serialTransmit: Bank000405btfss00406serialTransmit: Bank1, TXIF00407serial00407serial00407serial00407serial00407serial00407serial00407serial00407serial00407serial00407serial00407serial00408serial1powwf1serial00407serial00408serial1serial00407serial00408serial1serial00409serial1serial00410serial1serial00411serial1serial00412serial00413serial00415serial00416serial00417serial00418serial00419serial00416serial00416serial00416serial00416	00395 00396 ; 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00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check c 00403 btfss PIR1,TXIF ;check t 00406 stl btfss PIR1,TXIF ;check t 00406 return 00407 return 00407 return 00407 jMrite to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 00411 returns in bank3 00413 FlashWrite: Bank3 0x84 ;enable 00415 00415 movuw 0x84 ;enable 00416 00417 0x84 ;enable	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000309SerialTransmit: Bank000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT;check C00402goto00403btffss<pre>prkl,TXIF00404goto00405btffss<pre>prkl,TXIF00405btffss<pre>prkl,TXIF00406s-100407return00407return00407return00407return00407return00410jMrite to a location in the flash program memory00411jThis routine returns in bank300412Bank300413FlashWrite:00416movUw00415movVf00416movVf00417pank300418portion in the flash program memory00411portion in the flash program00412portion in the flash program00413FlashWrite:00415movUw00416movVf00415movVf00416movVf00416movVf00417ptime00415movVf00416movVf00417ptime00416movVf00417ptime00416ptime00416ptime00417ptime00416ptime00417ptime00417ptime<td>00396 ;</td><td>00395003960139770039770039870039970039970039900400003990040100401004020040300403004040040400405004050040600406004070040700408004090040900410700410700411700411700412004117004120041370041600416004170041700416004170041700416004170041</td><td>00395;::::::::::::::::::::::::::::::::::::</td><td>00395;Transmit byte in W register from USART00396;This routine returns in bank000398;This routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401Btfsc PORTB,CTS_INPUT;check C00402goto \$-100403btffss PIRI,TXIF00404goto \$-100405return00405return00407movwf00407goto \$-100407movwf00407serialTransmit: Bank300407ite to a location in the flash program memory00410jMrite to a location in the flash program memory00411jThis routine returns in bank300412movlw00413FlashWrite: Bank300416movlw00415movlw00415movlw00416movlw00417jchash00418movlw00415movlw00415movlw00416jchash</td><td>0039577</td><td>000305</td></pre></pre></pre></pre>	00396 ;	00395003960139770039770039870039970039970039900400003990040100401004020040300403004040040400405004050040600406004070040700408004090040900410700410700411700411700412004117004120041370041600416004170041700416004170041700416004170041	00395;::::::::::::::::::::::::::::::::::::	00395;Transmit byte in W register from USART00396;This routine returns in bank000398;This routine returns in bank000399SerialTransmit: Bank000400SerialTransmit: Bank000401Btfsc PORTB,CTS_INPUT;check C00402goto \$-100403btffss PIRI,TXIF00404goto \$-100405return00405return00407movwf00407goto \$-100407movwf00407serialTransmit: Bank300407ite to a location in the flash program memory00410jMrite to a location in the flash program memory00411jThis routine returns in bank300412movlw00413FlashWrite: Bank300416movlw00415movlw00415movlw00416movlw00417jchash00418movlw00415movlw00415movlw00416jchash	0039577	000305
<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 .This routine returns in bank0 00401 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT ;check c goto \$-1 00403 btfss PIRI,TXIF ;check t goto \$-1 00405 return 00405 return 00407 return 00407 ;hransmi 00410 ;Mrite to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 PlashWrite: Bank3 00415 movWf BECON1 00416 00416 movWf BECON1 00416 00416</pre>	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402Btfsc <portb,cts_input;check c<="" td="">00403goto \$-100404goto \$-100404btfss<pir1,txif< td="">00405btfss<pir1,txif< td="">00406s-100407goto \$-100406return00407movwf<txreg< td="">00407return00407return00407return00407return00408return00409in EEADRH and EEADR, data in EEDATH and00411in the flash program memory00412movuf00415movuf00415movuf00416movuf00415movuf00416<td< td=""><td><pre>00396 ;</pre></td><td>00395;rransmit byte in W register from USART00397;rransmit byte in W register from USART00398;rhansmit byte in W register from USART00399;rhansmit: Bank000400SerialTransmit: Bank000401Btfsc PORTB,CTS_INPUT;check C00402Btfss PIRL,TXIF00403Boto \$-100404For \$-100405btfss PIRL,TXIF00406\$-100406return00407movwf00407return00407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100407\$-100408\$-100410\$Mrite to a location in the flash program memory00411\$Mrite to a location in the flash program memory00412\$-100413\$-100415\$-100415\$-100416\$-100416\$-100415\$-100416\$-100416\$-100417\$-100418\$-100419\$-100416\$-100416\$-100416\$-100416\$-100416\$-1>>>>>>>>>>>>>>>>>>>>>></td><td>00395;Transmit byte in W register from USART00396;Transmit byte in W register from USART00398;This routine returns in bank0003990040000401Betfsc PORTB, CTS_INPUT; 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00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 .This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check c 00402 btfss PTR1,TXIF ;check t 00405 btfss PTR1,TXIF ;check t 00406 return 00406 return 00407 return 00407 return 00407 jtransmi 00407 jtransmi 00410 jMrite to a location in the flash program memory 00411 jThis routine returns in bank3 00413 FlashWrite: Bank3 00415 movWf EEQN1 00416 movWf BEADR, data in EEDATH and 00414 movlw 0x84 ;enable 00415 00416 movWf EECON1	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT;check C00402goto00403btfss<pre>PIRL,TXIF00404goto00405btfss<pre>pred00406s-100406return00407return00407return00407return00407return00407s-100407return00407return00407return00407return00407return00408return00409imite to a location in the flash program memory00411iThis routine returns in bank300412movwf00413flashWrite:00416movwf00415movuf00416returns in bank300415movuf00416returns in bank300415movuf00416returns in bank300416returns in bank300416retur</pre></pre></pre>	00396 ;	0039500396700397700397700398700399700399004000040000401004010040200403004030040400404004040040500405004060040600407004070040870040970040970040970041070041177004120041170041200413700415004167004170041877004197771718181919101010101011 <trr< td=""><td>00395;Transmit byte in W register from USART00396;Transmit byte in W register from USART00398;This routine returns in bank0003990040000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btffss PTR1,TXIF ;check t00404goto \$-100405return00406return00407return00407return00408return00409jwrite to a location in the flash program memory00410jMrite to a location in the flash program memory00411jThis routine returns in bank3004120041300415movwf Bank300416movwf BEADR, data in EEDATH and004160041400415movwf Bank30041600414004160041400416movwf BEADR, data in EEDATH and004160041400415PON1004160041600416004160041600416004160041600416004160041600416</td><td>00395;rransmit byte in W register from USART00396;This routine returns in bank000398;This routine returns in bank000399containt but for ports, creak t00399serialTransmit: Bank000400SerialTransmit: Bank000401but for ports, crrs_INPUT; 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Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00406 return 00407 00406 return 00407 00406 returns in bank3 00411 ; This routine returns in bank3 00413 FlashWrite: Bank3 00415 movWf EECON1 00415 movWf EECON1</td><td>00395</td></t<>	00395;rransmit byte in W register from USART00396;This routine returns in bank000398;This routine returns in bank000399serialTransmit: Bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403ytfss PIRI,TXIF ;check C00404goto \$-100405btfss PIRI,TXIF ;check t00406goto \$-100405return00406ytfss pIRI,TXIF ;check t00407goto \$-100407return00408return00409frante to a location in the flash program memory00410jmtite to a location in the flash program memory00411jThis routine returns in bank300412movuf movuf 0X8400415movuf 0X8400415movuf 0X8400415movuf 0X8400415movuf 0X8400415movuf 0X84	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00406 return 00407 00406 return 00407 00406 returns in bank3 00411 ; This routine returns in bank3 00413 FlashWrite: Bank3 00415 movWf EECON1 00415 movWf EECON1	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 .This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check c 00402 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00405 return 00406 return 00407 return 00407 return 00407 jmite to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00413 flashWrite: Bank3 00415 movWf EECON1 00415 movWf EECON1	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000309serialTransmit: Bank000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT00402goto00403btfss<pre>PIRI,TXIF00404goto00405btfss<pre>prin,TXIF00406return00407return00407return00407return00407return00407return00407return00407return00407return00407return00407return00407return00407return00407return00408return00407return00407return00408return00409return00410return00411returns in bank300412returns in bank300413returns in bank300415movuf00415movuf00415movuf00415movuf00415movuf00415movuf00415movuf00415movuf00416returns in bank300417returns in bank300418return00419return00415return00416return00416return00416<t< td=""><td>00396 ;</td><td>00395003967003977003977003977003977003977003977003977003977003990040000401004020040300403004040040400405004050040600406004070040700408700409700409700409700410710410710411710412104117104121041310414104141041510416104161041110412104131041410415104151041610416104171041810419104191041110411104121041310414104151041510416104161041610417104181041910419104191041910419104191041910419104191041910419</td><td>00395 7 Transmit byte in W register from USART 00398 7 This routine returns in bank0 00399 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check c 00402 btfss PTR1,TXIF ;check t 00403 btfss PTR1,TXIF ;check t 00406 serialTransmit rated ; 00406 return 00406 return 00407 00407 return 00407 jtransmi 00407 return 00408 jruntet flash program memory 00410 jMrite to a location in the flash program memory 00411 jThis routine returns in bank3 00413 flashWrite: Bank3 ;change 00415 movWf EECON1</td><td>00395;::::::::::::::::::::::::::::::::::::</td><td>00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 serialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check c 00403 btfss PIRL, TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00406 return 00407 ; check t 00407 % data in EEDATH and 00401 ; This routine returns in bank3 00413 FlashWrite: Bank3 00415 movWf EECON1 00415 movWf EECON1</td><td>00395</td></t<></pre></pre></pre>	00396 ;	00395003967003977003977003977003977003977003977003977003977003990040000401004020040300403004040040400405004050040600406004070040700408700409700409700409700410710410710411710412104117104121041310414104141041510416104161041110412104131041410415104151041610416104171041810419104191041110411104121041310414104151041510416104161041610417104181041910419104191041910419104191041910419104191041910419	00395 7 Transmit byte in W register from USART 00398 7 This routine returns in bank0 00399 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check c 00402 btfss PTR1,TXIF ;check t 00403 btfss PTR1,TXIF ;check t 00406 serialTransmit rated ; 00406 return 00406 return 00407 00407 return 00407 jtransmi 00407 return 00408 jruntet flash program memory 00410 jMrite to a location in the flash program memory 00411 jThis routine returns in bank3 00413 flashWrite: Bank3 ;change 00415 movWf EECON1	00395;::::::::::::::::::::::::::::::::::::	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 serialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check c 00403 btfss PIRL, TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00406 return 00407 ; check t 00407 % data in EEDATH and 00401 ; This routine returns in bank3 00413 FlashWrite: Bank3 00415 movWf EECON1 00415 movWf EECON1	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401Btfsc PORTB,CTS_INPUT;check C00402goto \$-100403btfss PIRL,TXIF00404goto \$-100405return00406return00407return00407return00408return00409;Write to a location in the flash program memory00410;Matte: bank300411;This routine returns in bank300412movuf 0X8400413flashWrite: Bank300415movuf EECON1	00396 ;	00395 ; This routine returns in bank0 00397 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00405 return 00406 return 00406 return 00407 return 00407 jmite to a location in the flash program memory 00410 jMrite to a location in the flash program memory 00411 jThis routine returns in bank3 00413 FlashWrite: Bank3 jchange 00415 movWf EECON1	0039500396777771039871039871039910399103991039910399103991039910399103991039010401104011040110402104031040310404104041040410405104071040710408104091040911 <td>00395;:rransmit byte in W register from USART00396;:This routine returns in bank000398;This routine returns in bank00039900400003990040100401Betfsc PORTB,CTS_INPUT;check C00402goto \$-100403betfsc PORTB,CTS_INPUT;check C00404goto \$-100405betfss PIRL,TXIF00406coud00407goto \$-100407return00407return00407return00407joto \$-100407return00407joto \$-100407return00407joto \$-100407joto \$-100407joto \$-100407in bank300410jddress in EEADRH and EEADR, data in EEDATH and00411jrhis routine returns in bank300412flashWrite: Bank300413flashWrite: Bank300415movUw 0x8400415movUw 0x84</td> <td>00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check c 00402 goto \$-1 00403 btfss PIRL, TXIF ; check t 00405 btfss PIRL, TXIF ; check t 00405 return 00406 return 00406 return 00407 00408 ;</td> <td>00395</td>	00395;:rransmit byte in W register from USART00396;:This routine returns in bank000398;This routine returns in bank00039900400003990040100401Betfsc PORTB,CTS_INPUT;check C00402goto \$-100403betfsc PORTB,CTS_INPUT;check C00404goto \$-100405betfss PIRL,TXIF00406coud00407goto \$-100407return00407return00407return00407joto \$-100407return00407joto \$-100407return00407joto \$-100407joto \$-100407joto \$-100407in bank300410jddress in EEADRH and EEADR, data in EEDATH and00411jrhis routine returns in bank300412flashWrite: Bank300413flashWrite: Bank300415movUw 0x8400415movUw 0x84	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check c 00402 goto \$-1 00403 btfss PIRL, TXIF ; check t 00405 btfss PIRL, TXIF ; check t 00405 return 00406 return 00406 return 00407 00408 ;	00395
003977 Transmit byte in W register from USART003987 This routine returns in bank0003990040000400SerialTransmit: Bank000401Butfsc PORTB,CTS_INPUT;check c0040290to00403butfss PIRL,TXIF00404Goto00405butfss PIRL,TXIF00406return00407return00407return00407return00407return00407return00407return00407return00410jmrite to a location in the flash program memory00411jThis routine returns in bank300412Bank300413FlashWrite:00414movUw00414movUw00415MovU00416prodice00417prodice00418provin00413provin00414provin	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402Btfsc <portb,cts_input;check c<="" td="">00403btffsc<portb,cts_input;check c<="" td="">00404goto \$-100404poto \$-100405btffss<ptri,txif< td="">00406return00407return00407return00407return00407return00407return00407return00407return00410iWrite to a location in the flash program memory00411iThis routine returns in bank300412Pankite:00413FlashWrite:00414movUw00412MovUw00413Pank300414Pankite:00414Panki in SEDATH and00412Panki in bank300413Panki in bank300414Panki in bank300414Panki in bank300414Panki in bank300414Panki in bank300414Panki in banki00414Panki in banki00414Panki in banki</ptri,txif<></portb,cts_input;check></portb,cts_input;check>	00396;	003395;Transmit byte in W register from USART003397;Transmit byte in W register from USART003393;This routine returns in bank00033940040000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btffss PTR1,TXIF00404goto \$-100405return00406return00407goto \$-100407return00407goto \$-100407goto \$-100407goto \$-100407goto \$-100407goto \$-100407goto \$-100407novwf00407goto \$-100407goto \$-100410goto \$-100411goto \$-100412movle movle flash program memory00412good \$-100413flashWrite:00414movle movle movle flash stable00415movle movle flash stable	00395;::::::::::::::::::::::::::::::::::::	00395;:rransmit byte in W register from USART00396;:This routine returns in bank000398;This routine returns in bank0003990040000400SerialTransmit: Bank000401Btfsc PORTB,CTS_INPUT;check C00402goto \$-100403btfss PIRI,TXIF00404goto \$-100405btfss PIRI,TXIF00406return00407return00407goto \$-100407serialTransmit: Bank000407return00407return00407return00407return00407return00407return00410in EEADRH and EEADR, data in EEDATH and00411rutine returns in bank300412movule in bank300413FlashWrite: Bank300414movule 0x4400414movule 0x4400415movule 0x44	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIRI,TXIF ; check t 00403 btfss PIRI,TXIF ; check t 00405 coto \$-1 00405 return 00406 return 00407 return 00407 return 00409 ; movwf TXRG ; transmi 00400 ; movwf at a in EEDATH and 00411 ; This routine returns in bank3 00412 movulw 0x84 ; change 00414 movulw 0x84 ; change	00395
00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401Butfsc PORTB, CTS_INPUT ;check C00402goto01403butfss PIRI, TXIF00404goto01404goto01405butfss PIRI, TXIF01406return01407return01407return01407return01407return01407goto01407return01407return01410jMrite to a location in the flash program memory00411jThis routine returns in bank300412PlashWrite:00413FlashWrite:00414movlw<	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402Buffsc00403SerialTransmit: Bank000404Buffsc00403Buffsc00404Butfsc00404Butfsc00405S-100406\$-100406return00407movwf00407return00408\$	00396 ;	003350033601397013970139801399014000139901400014000140101401014010140201403014030140401404014030140401404014040140501405014060140601407014070140801407014090140901410014110141101412014120141301414<	00395003960039700398014000039900401004010040200401004030040300404004040040400405004070040700408004090040500406004060040700407004080040600407004070040800407004070040800407004070040800407004070040800407004070040800409004090041000410004117his routine returns in bank3004120041300414	00395;rransmit byte in W register from USART00397;Transmit byte in W register from USART00398;This routine returns in bank000399serialTransmit: Bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT;check C00402goto \$-100403btffsc PORTB,CTS_INPUT;check C00404goto \$-100405btffsc PORTB,CTS_INPUT;check C00406goto \$-100405tetturn00406s-100407movwf TXREG00407return00407yrite to a location in the flash program memory00409jwrite to a location in the flash program memory00411jThis routine returns in bank300412flashWrite: Bank300413flashWrite: Bank300414movlw 0x8400414movlw 0x84	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT; check C 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00406 return 00407 00406 return 00407 00406 return 00407 return 00408 ; rransmi 00407 movwf TXREG ; transmi 00407 movwf atta in EEDATH and 00411 ; This routine returns in bank3 00413 FlashWrite: Bank3 ; change	0039500396013970139801398013980140001400SerialTransmit Banko00401Detfsc0040200403Dot403Dot404Dot404Dot405Dot404Dot406Dot407Dot408Dot406Dot409MarketDot409ParterDot409ParterDot409ParterDot409ParterDot409ParterDot409ParterDot409Parter
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check c 00403 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00406 return 00406 return 00407 return 00407 jette to a location in the flash program memory 00410 ;Mrite to a location in the flash program memory 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 00414 movUw 0x84 ;change	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402Btfsc <portb,cts_input;check c<="" td="">00403goto00403Btfss<piri,txif< td="">00404s-100405btfss<piri,txif< td="">00406return00406return00407return00407return00407return00408return00409imite to a location in the flash program memory00410jAddress in EEADRH and EEADR, data in EEDATH and00411iThis routine returns in bank3004120041100413FlashWrite:00414movUw00414movUw00414movUw00414movUw00414movUw00414movUw00414movUw00414movUw00414movUw0041400414movUw00414movUw00414</piri,txif<></piri,txif<></portb,cts_input;check>	00396 ;	00395003960139701397013980139901400013990140001401014010140201403014030140401404014030140401404014050140501406014060140601407014070140801409014090140901409014090141011111112014111314014121415151515161717181818181911111111111111111213141414151415141514151415151617181819191919191919191919191919191919 <td>00395 7.Transmit byte in W register from USART 00398 7.This routine returns in bank0 00399 00400 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT; check C 00403 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00406 *-1 00406 return 00406 return 00407 return 00407 return 00407 program memory 00407 in the flash program memory 00410 jMrite to a location in the flash program memory 00411 jThis routine returns in bank3 00412 movUm 0x84 ; change 00413 FlashWrite: Bank3 00414 movUm 0x84 ; change</td> <td>00395003967700397700398700398700399700399700399700399104001040010401104011040210402104031040310404104041040410405104051040610407104071040810407104091111111111111212131414151415141514151415141514141514151415141514151414151414141515161718181819191919191919191919191919191919<t< td=""><td>00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check c 00402 btfss PIRL,TXIF ; check t 00403 btfss PIRL,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00407 ; check t 00407 goto \$-1 00406 return 00407 goto \$-1 00406 return 00407 goto \$-1 00407 in the flash program memory 00401 ; This routine returns in bank3 00413 FlashWrite: Bank3 ; change 00414 moVlw 0X84 ; enable</td><td>00395</td></t<></td>	00395 7.Transmit byte in W register from USART 00398 7.This routine returns in bank0 00399 00400 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT; check C 00403 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00406 *-1 00406 return 00406 return 00407 return 00407 return 00407 program memory 00407 in the flash program memory 00410 jMrite to a location in the flash program memory 00411 jThis routine returns in bank3 00412 movUm 0x84 ; change 00413 FlashWrite: Bank3 00414 movUm 0x84 ; change	00395003967700397700398700398700399700399700399700399104001040010401104011040210402104031040310404104041040410405104051040610407104071040810407104091111111111111212131414151415141514151415141514141514151415141514151414151414141515161718181819191919191919191919191919191919 <t< td=""><td>00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check c 00402 btfss PIRL,TXIF ; check t 00403 btfss PIRL,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00407 ; check t 00407 goto \$-1 00406 return 00407 goto \$-1 00406 return 00407 goto \$-1 00407 in the flash program memory 00401 ; This routine returns in bank3 00413 FlashWrite: Bank3 ; change 00414 moVlw 0X84 ; enable</td><td>00395</td></t<>	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check c 00402 btfss PIRL,TXIF ; check t 00403 btfss PIRL,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00407 ; check t 00407 goto \$-1 00406 return 00407 goto \$-1 00406 return 00407 goto \$-1 00407 in the flash program memory 00401 ; This routine returns in bank3 00413 FlashWrite: Bank3 ; change 00414 moVlw 0X84 ; enable	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIR1,TXIF ;check t 00404 movwf TXREG \$-1 00405 return 00405 return 00407 return 00407 ;rransmi 00407 jWrite to a location in the flash program memory 00410 ;Marite: Bank1 and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 00413 FlashWrite: Bank3 00414 0x84 ;enable	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000309;SerialTransmit: Bank000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT;check C00402goto \$-100403goto \$-100404goto \$-100405ptfss PIRL,TXIF00406return00406return00407return00407return00409;mrite to a location in the flash program memory00410;Mrite to a location in the flash program memory00411;This routine returns in bank300413PlashWrite:00413PlashWrite:00414movUw00413returns in bank300414movUw00414movUw00414movUw00414movUw00414povIw00414movUw<	00396 ;	00395003967003977003977003987003997003990040000400004010040100402004030040300404004040040400405004050040600406004070040700408700409700409700409700410700411700412004137004140041370041400414700414700412004137004140	00395 7 Transmit byte in W register from USART 00398 7 Transmit byte in W register from USART 00398 00400 SerialTransmit: BankO 00401 btfsc PORTB,CTS_INPUT; check C 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00405 btfss PIR1,TXIF ; check t 00406 seturn 00406 return 00407 return 00407 return 00409 jWrite to a location in the flash program memory 00410 jAddress in EEADRH and EEADR, data in EEDATH and 00411 jThis routine returns in bank3 00412 00413 FlashWrite: Bank3 ; change	00395003967003977003987003987003987003987003987003987003990040000401004010040200403004030040400404004050040600406004070040700408700409700409700409700409700401700403700403700404700405700407004070040870040970040970040970040170040370040370040470041070041170041270041370041400414004140041400414004140041400414004140041400414004140041400414004140041400414<	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 serialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check c 00402 goto \$-1 00403 btfss PIRL, TXIF ; check t 00405 btfss PIRL, TXIF ; check t 00405 return 00406 return 00407 return 00407 return 00409 ; Write to a location in the flash program memory 00411 ; This routine returns in bank3 00413 FlashWrite: Bank3 00414 moVW 0X84 ; change	00395
003977 Transmit byte in W register from USART003987 This routine returns in bank0003990040000400SerialTransmit: Bank000401Butfsc PORTB,CTS_INPUT;check C0040290to00403butfss PIRL,TXIF00404Goto00405TXREG00406return00407return00408return00409Mrite to a location in the flash program memory00410Address in EEADRH and EEADR, data in EEDATH and00411This routine returns in bank300412Bank100412Bank300413FlashWrite:00413FlashWrite:00413FlashWrite:00413FlashWrite:00413FlashWrite:00413FlashWrite:00413FlashWrite:00413FlashWrite:00413FlashWrite:00413FlashWrite:00413FlashWrite:00413FlashWrite:00413FlashWrite:	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402Btfsc <portb,cts_input;check c<="" td="">00403btffsc<portb,cts_input;check c<="" td="">00404goto \$-100405btffss<pir1,txif< td="">00406s-100407movwf<txrg< td="">00407return00407return00407for solution in the flash program memory00410;Mrite to a location in the flash program memory00411;This routine returns in bank300412Rankite:00413FlashWrite:00413FlashWrite:00413FlashWrite:00413FlashWrite:</txrg<></pir1,txif<></portb,cts_input;check></portb,cts_input;check>	00396 ;	00395;Transmit byte in W register from USART00397;Transmit byte in W register from USART00398;This routine returns in bank0003990040000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402btffss PIR1,TXIF ;check C00403btffss PIR1,TXIF ;check C00404goto \$-100405return00406return00407goto \$100408return00409;movwf TXREG00409;mrite to a location in the flash program memory00410;Address in EEADRH and EEADR, data in EEDATH and00411;This routine returns in bank300412Bank100413FlashWrite:00413FlashWrite:00413FlashWrite:00413movin	003950039600397003980039800399003990039900400SerialTransmit: Bank000401004010040200403btfsc <pre>portb,CTS_INPUT;check c00403btfsc<pre>portb,CTS_INPUT;check c00404004050040500406return004070040700408porto00407004070040700408porto00409porto00409protection in the flash program memory00410pMarite to a location in the flash program memory00411pMarite: Bank30041200413PlashWrite: Bank300414pman00413pman00413pman00414pman</pre></pre>	00395;::::::::::::::::::::::::::::::::::::	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIRI,TXIF ; check C 00403 btfss PIRI,TXIF ; check t 00405 coto \$-1 00405 return 00406 return 00407 return 00407 return 00410 ; Mores in EEADRH and EEADR, data in EEDATH and 00412 returns in bank3 00413 FlashWrite: Bank3 00413 FlashWrite: Bank3 00413 returns in bank3 00414 returns in bank3 00413 returns in bank3 00415 returns in bank3 00416 returns in bank3 00416 returns in bank3 00417 returns in bank3 00417 returns in bank3 00418 returns in bank3 00411 returns in bank3 00411 returns in bank3 00411 returns in bank3	003950039670039670039870039870039870039870039870039870039870039870039870039870039870039870040080040100402004030040400404004050040600407004070040700408700409700407004097004097004107004107004117004120041270041370041370041200413700413700413700414700412004137004137004147777777777777777777 <td< td=""></td<>
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00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIR1,TXIF ;check t 00404 goto \$-1 ;check t 00405 return goto \$-1 ;transmi 00406 return movyf TXREG ;transmi 00407 00406 return movyf Aata in EEDATH and 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00413 FlashWrite: Bank3 ;change	00397;Transmit byte in W register from USART00398;This routine returns in bank000398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT;check C00402goto00403btfss<pre>PIRI,TXIF00404goto00405btfss<pre>prin,TXIF00406return00407return00407return00407return00407return00407return00407return00407return00407return00407return00407return00407return00410finite to a location in the flash program memory00411finis routine returns in bank300412flashWrite:00413<</pre></pre></pre>	00396 ;	00395 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; chack c 90402 btfss PIRI, TXIF ; check t 90403 btfss PIRI, TXIF ; check t 00405 btfss PIRI, TXIF ; check t 00405 return 00406 return 00407 return 00407 ptrite to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00412 00413 FlashWrite: Bank3 ; change	00395 7. Transmit byte in W register from USART 00398 7. This routine returns in bank0 00399 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT; check c 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00405 return 00406 return 00406 return 00407 00407 00407 ; movwf TXREG ; transmi return 00407 movwf BADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00412 returns in bank3 00413 FlashWrite: Bank3 ; change	0039500396770039770039870039870039870039900309003090040000401004010040200402004030040300404004040040400405004050040600407004070040870040970040970040970041070041170041200411700412004117004120041200413<	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIR1,TXIF ;check t 00404 movwf TXREG ;transmi 00405 return 00406 return 00407 ;mite to a location in the flash program memory 00410 ;Mdress in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 00413 FlashWrite: Bank3 ;change	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000309;SerialTransmit: Bank000400SerialTransmit: Bank000401btfsc PORTB, CTS_INPUT; check C00402goto \$-100403goto \$-100404movwf TXRG00405return00406return00407return00407return00407return00409;Write to a location in the flash program memory00410;Madress in EEADRH and EEADR, data in EEDATH and00411;This routine returns in bank300412:AlashWrite:00413<	00396 ;	00395 ; This routine returns in bank0 00397 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 erialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check C 00402 btfss PIR1, TXIF ; check t 00403 btfss PIR1, TXIF ; check t 00405 btfss PIR1, TXIF ; check t 00406 return 00406 return 00407 return 00407 00408 ;	00395 7 Transmit byte in W register from USART 00398 7 This routine returns in bank0 00399 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT;check C 00403 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00406 return 00406 return 00407 00408 return 00407 00409 jWrite to a location in the flash program memory 00410 jAddress in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 00413 FlashWrite: Bank3 ;change	00395;::::::::::::::::::::::::::::::::::::	00395 00396 ; Tansmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check c 00402 goto \$-1 btfss PIRI, TXIF ; check t 00403 goto \$-1 btfss pIRI, TXIF ; check t 00405 btfss PIRI, TXIF ; check t 00405 return 00406 return 00407 return 00409 ; Write to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00413 FlashWrite: Bank3 ; change	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIRI,TXIF ;check t 00404 goto \$-1 ;check t 00405 return 00406 return 00407 ;rransmi 00409 ;Mrite to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 00413 rlachWrite. Bank3	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT;check C 00403 btfss PIRI,TXIF ;check t 00404 \$<1 ;check t 00405 btfss PIRI,TXIF ;check t 00406 return ;check t 00406 return ;check t 00407 00406 return movwf TXREG ;transmi 00407 00408 ;return 00400 in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 00413 FlachWrite. Bank3	00396 ;	00395 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check c 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00405 return 00405 return 00406 return 00407 ; check t 00408 ; return 00409 ; Write to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00412 00413 FlachWrite. Bank3	00395 00396 ;rrensmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check c 00402 btfss PIRI,TXIF ;check c 00403 btfss PIRI,TXIF ;check c 00405 btfss PIRI,TXIF ;check c 00406 return 00406 return 00407 return 00409 ;Mrite to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 returns in bank3	00395;::::::::::::::::::::::::::::::::::::	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT; check C 00402 btfss PIRI,TXIF ; check C 00403 btfss PIRI,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00409 ; Mrite to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00411 glachWrite. Bank3 00413 FlachWrite. Bank3	000305
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIRI,TXIF ;check C 00403 btfss PIRI,TXIF ;check t 00404 goto \$-1 00405 return 00405 return 00407 return 00407 return 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412 return</pre>	00396 ;	00395;Transmit byte in W register from USART00397;Transmit byte in W register from USART00398;This routine returns in bank0003990040100401BerfalTransmit: Bank000402btfsc PORTB,CTS_INPUT ;check c00403btffsc PORTB,CTS_INPUT ;check c00403btffsc PORTB,CTS_INPUT ;check c00404goto \$-100405return00406return00407return00408in bank100409in bank100410jMrite to a location in the flash program memory00411iThis routine returns in bank300412in bank3	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 btfsc PORTB, CTS_INPUT ; check c 00403 btfss PIRI, TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00407 return 00409 ; Mrite to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00412 ; This routine returns in bank3 00412 ; This routine returns in bank3	0039500396770039770039870039900400800401800401900402004039004040040490040500405104061040710407104081040710409104091041010410104111041110411104121041210411104121041110412104111041210411104121041110412104111041210412104121041310414 <trr< td=""><td>00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIRI,TXIF ; check C 00403 btfss PIRI,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00407 return 00407 return 00407 jMite to a location in the flash program memory 00411 ; This routine returns in bank3 00412 This routine returns in bank3</td><td>00395 00396 ; Tansmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIR1,TXIF ; check C 00403 btfss PIR1,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00407 ; data in EEDATH and 00411 ; This routine returns in bank3 00412 ; This routine returns in bank3</td></trr<>	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIRI,TXIF ; check C 00403 btfss PIRI,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00407 return 00407 return 00407 jMite to a location in the flash program memory 00411 ; This routine returns in bank3 00412 This routine returns in bank3	00395 00396 ; Tansmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIR1,TXIF ; check C 00403 btfss PIR1,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00407 ; data in EEDATH and 00411 ; This routine returns in bank3 00412 ; This routine returns in bank3
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIRI,TXIF ;check t 00404 goto \$-1 ;check t 00405 return 00405 return 00406 return 00407 return 00407 return 00409 ;mrite to a location in the flash program memory 00411 ;This routine returns in bank3 00412 00412 00412 motion returns in bank3	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00402serialTransmit: Bank000403btfsc00403btfsc00404goto00403btfss00404poto00404btfss00405s-100405return00406return00407return00408return00409immeter flash program memory00410immeter flash program memory00411immeter flash program memory00412immeter flash brogram memory00411immeter returns in bank300412	00396 ;	0039500396013977003977003987003997003997003990040000401004020040200403004030040400404004040040500405004060040600407004070040870040970040970041070041070041070040700407004087004097004107004107004107004107004107004107004107004117004120041200412	00395 00396 ;rransmit byte in W register from USART 00398 ;This routine returns in bank0 00399 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIRI,TXIF ;check C 00403 btfss PIRI,TXIF ;check C 00404 goto \$-1 00405 return 00406 return 00406 return 00407 ;rransmi 00407 program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00399 jurite to a location in the flash program memory 00412 proteine returns in bank3	003950039677003977003987003987003999004008004019004020040300403004040040410404104051040510404104051040610406104071040710408104071040910409104091041010410104111041110412104121041110412	00395 00396 ; Tansmit byte in W register from USART 00398 ; This routine returns in bank0 00309 coton SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT; check C 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00407 jtransmi 00407 itransmi 00407 itransmi 00408 itre to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00412	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIRI,TXIF ;check t 00404 goto \$-1 00405 return 00406 return 00407 ;transmi 00408 ;	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT;check C00402goto00403Utfss<pre>PIR1,TXIF00404goto00405btfss<pre>pres, TR1,TXIF00406return00406return00407return00407return00408return00409;Mrite to a location in the flash program memory00411;This routine returns in bank300412:Address in EEADRH and EEADR, data in EEDATH and00412:Mite routine returns in bank3</pre></pre></pre>	00396 ;	00395 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; change 00402 btfss PIRI, TXIF ; check t 00403 btfss PIRI, TXIF ; check t 00405 btfss PIRI, TXIF ; check t 00405 return 00406 return 00407 return 00407 return 00409 ; Mrite to a location in the flash program memory 00411 ; This routine returns in bank3 00412 00412	00395 7 ;Transmit byte in W register from USART 00396 ;This routine returns in bank0 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIRI,TXIF ;check C 00403 btfss PIRI,TXIF ;check C 00404 btfss PIRI,TXIF ;transmi 00405 return 00406 return 00407 return 00408 ;rransmi 00408 ;rransmi 00408 ;rransmi 00408 ;rransmi 00408 ;rransmi 00408 ;rransmi 00408 ;rransmi 00401 ;transmi 00401 ;transmi 00401 ;transmi 00401 ;transmi 00401 ;transmi 00401 ;transmi 00401 ;transmi 00401 ;transmi 00401 ;transmi 00402 return 00401 ;transmi 00401 ;transmi 00401 ;transmi 00401 ;transmi 00401 ;transmi 00401 ;transmi	003950039677003977003987003987003999004008004019004029004030040300404900403004049004040040400405004050040600407004070040870040990040990040117111	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT;check C00402btfss<pre>PIR1,TXIF00403goto00403goto00404movwf00405return00406return00407return00407return00409;mite to a location in the flash program memory00410;Mrite to a location in the flash program memory00411;This routine returns in bank300412;Mrite routine returns in bank3</pre></pre>	00396 ;	00395 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check C 00402 btfss PIR1, TXIF ; check t 00403 btfss PIR1, TXIF ; check t 00406 x-1 ; ransmi 00405 return 00406 return 00407 veturn 00407 00408 ;	00395 7 Transmit byte in W register from USART 00398 7 Transmit byte in W register from USART 00399 00400 SerialTransmit: BankO 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TKIF ;check c 00403 btfss PIR1,TKIF ;check t 00405 btfss PIR1,TKIF ;check t 00405 return 00406 return 00406 return 00407 00408 ;	00395 00396 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIRL,TXIF ;check t 00403 btfss PIRL,TXIF ;check t 00405 transmi 00405 return 00406 return 00407 return 00407 in the flash program memory 00411 ;This routine returns in bank3 00412 00412	00395 00396 ; Tansmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check c 00402 btfss PIRL, TXIF ; check t 00403 goto \$-1 00405 transmi 00406 return 00406 return 00407 return 00409 ; Write to a location in the flash program memory 00411 ; This routine returns in bank3 00412 00412	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIRI,TXIF ;check t 00404 goto \$-1 ;check t 00405 transmi 00406 return ;check t 00406 return 00406 return 00407 00406 return in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3	00396 ;	00395 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00405 btfss PIR1,TXIF ; check t 00405 return 00406 return 00407 return 00407 00409 ; movwf TXREG ; transmi 00400 i Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3 00411 ; This routine returns in bank3	00395 00396 ;rransmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check c 00402 btfss PIRI,TXIF ;check c 00403 btfss PIRI,TXIF ;check t 00405 return 00405 return 00406 return 00407 ;rransmi 00407 ;rransmi 00409 ;Write to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3 00412	0039500396777003987003990039900399004008004019004020040300403004049004030040490040400405900405104061040710407104081040910409104091041010410104101041010411111111111112121314141515161717181919101010111112121213141514151415161717181919191011111212131414141414141414141414141414	00395 00396 ;	000305
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	<pre>00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00309 ;This routine returns in bank0 00400 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIRI,TXIF ;check C 00403 btfss PIRI,TXIF ;check t 00404 goto \$-1 00405 return 00406 return 00407 return 00407 ;hransmi 00410 ;Matre to a location in the flash program memory 00411 ;This routine returns in bank3 00411 ;This routine returns in bank3</pre>	00396 ;	00395;Transmit byte in W register from USART00397;Transmit byte in W register from USART00398;This routine returns in bank0003990040000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check C00402goto \$-100403btfss PIRI,TXIF00404goto \$-100405return00407return00408return00409?mite to a location in the flash program memory00410?his routine returns in bank3	00395 00396 ;rransmit byte in W register from USART 00398 ;This routine returns in bank0 00309 cod 00 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 cod 0 00402 btfsc PORTB,CTS_INPUT ;check c 00403 btfss PIRI,TXIF ;check t 00403 btfss PIRI,TXIF ;check t 00405 btfss PIRI,TXIF ;check t 00405 return 00406 return 00407 ;rransmi 00410 ;Mrite to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3	003950039677003977003987003990039900400800401800401900402004030040300404004049004050040500406004060040700407004080040970040970041070041070041171000411710<	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 SerialTransmit: Bank0 ; change 00400 SerialTransmit: Bank0 ; change 00401 btfsc PORTB, CTS_INPUT ; check C 00402 btfss PIRI, TXIF ; check C 00403 btfss PIRI, TXIF ; check t 00404 goto \$-1 00405 transmi 00406 return 00407 return 00407 return 00409 ; Write to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3	00395 00396 ; Tansmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT; check C 00402 btfss PIR1,TXIF ; check t 00403 goto \$-1 00404 goto \$-1 00405 return 00406 return 00406 return 00407 j. TXREG ; transmi 00407 return 00408 ; reasen memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIRI,TXIF ;check t 00404 goto \$-1 00405 return 00406 return 00407 return 00407 00409 ;mrite to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00309 ;This routine returns in bank0 00400 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00404 goto \$-1 ;transmi 00406 return 00406 return 00407 in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3	00396 ;	003950039601397700397700398700399700399700399014000040000401004020040200403004030040300404004040040400405004050040600406004070040700408700409700409700410700410700410700410700410700411700411700411700411700411700411700411700411700411700411700411700411700411700411700411700411700411777777777777777777	00395 00396 ;rransmit byte in W register from USART 00398 ;This routine returns in bank0 00399 scialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT;check C 00402 btfss PIRI,TXIF ;check t 00403 btfss PIRI,TXIF ;check t 00404 goto \$-1 00405 return 00406 return 00407 return 00409 ;mrite to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and 00411 ;This routine returns in bank3	003950039677700398790039871003987100398710039910039910039910039910039910040010040110040211 <t< td=""><td>00395 00396 ; Tansmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00407 jeres in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3</td><td>003950039601397013980139801398013980140001400SerialTransmit: Banko00401btfsc00402014030140301404btfsc004030140401404014050140701408014040140501404014050140601407014080140701409014090140901409014101014111</td></t<>	00395 00396 ; Tansmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00406 return 00407 jeres in EEADRH and EEADR, data in EEDATH and 00411 ; This routine returns in bank3	003950039601397013980139801398013980140001400SerialTransmit: Banko00401btfsc00402014030140301404btfsc004030140401404014050140701408014040140501404014050140601407014080140701409014090140901409014101014111
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00405 t goto \$-1 ;transmi movwf TXRG ;transmi 00406 return 00406 ;transmi 00407 00406 return movef flash program memory 00410 ;Mrite to a location in the flash program memory 00411 ;This routine returns in bank3	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402PorTB, CTS_INPUT ;check C00403goto \$-100403potfiss PIRL, TXIF00404goto \$-100405potfiss PIRL, TXIF00406return00407return00407return00407return00409;Mrite to a location in the flash program memory00410;Mrite to a location in the flash program memory00411;This routine returns in bank3	00396 ;	00395 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; change 00402 btfss PIRI, TXIF ; check t 00403 btfss PIRI, TXIF ; check t 00405 btfss PIRI, TXIF ; check t 00405 return 00406 return 00407 return 00407 movwf TXREG ; transmi 00407 movvf data in EEDATH and 00411 ; This routine returns in bank3	00395 7. Transmit byte in W register from USART 00398 7. This routine returns in bank0 00399 00400 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT; check c 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00406 \$-1 00406 return 00406 return 00407 00407 return 00409 ; Write to a location in the flash program memory 00411 ; This routine returns in bank3	00395003967700397700398700398700399700399700399004008004018004019004020040390040490040300404004040040500405100406004070040700408700409700409700409700401110040111 <td< td=""><td>00395 00396 ;</td><td>00395</td></td<>	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIRI,TXIF ;check t 00404 goto \$-1 ;check t 00405 btfss PIRI,TXIF ;check t 00406 return ;check t 00406 return 00406 return 00406 return 00407 00407 return 00407 00409 ;Write to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and	00396 ;	00395 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00399 contail transmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check C 00402 btfss PIR1, TXIF ; check t 00403 btfss PIR1, TXIF ; check t 00405 btfss PIR1, TXIF ; check t 00405 return 00406 return 00407 contail return 00409 ; Write to a location in the flash program memory 00410 ; Address in EEADRH and EEADRH and SEADRH and 00411 the routine return in bank3	00395 00396 ;rransmit byte in W register from USART 00398 ;This routine returns in bank0 00399 returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check c 00402 btfss PIR1,TXIF ;check c 00403 btfss PIR1,TXIF ;check t 00405 return 00405 return 00406 return 00407 ;rransmi 00409 ;mrite to a location in the flash program memory 00410 ;Mdress in EEADRH and EEADRH and EEADRH and 00411 ;This routine return in bank3	00395 00396; Transmit byte in W register from USART 00398; This routine returns in bank0 00399 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 Duffsc PORTB,CTS_INPUT; check C 00403 btfsc PORTB,CTS_INPUT; check C 00403 btfss PIRI,TXIF ; check C 00404 \$-1 00405 return 00407 return 00409; return 00409 ; Write to a location in the flash program memory 00410 ; Mdress in EEADRH and EEADRH and EEADRH and 00411 This routine return and Hank3	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;change 00402 btfss PIR1,TXIF ;check c 00403 btfss PIR1,TXIF ;check t 00404 goto \$-1 00405 return 00406 return 00407 return 00409 ;Write to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402btfsc00403btfsc00404goto00403btfss00404goto00404btfss00405btfss00405return00406return00407return00408return00409return00409return00400return00400return00400return00400return00401return00402return00403return00404return00404return00405return <td>00396 ;</td> <td>00395;Transmit byte in W register from USART00397;Transmit byte in W register from USART00398;This routine returns in bank0003990040000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check c00402goto \$-100403btfss PIRI,TXIF00404goto \$-100405return00406return00407return00409?movef TXREG00409?mote a location in the flash program memory00410?ddress in EEADRH and EEADR, data in EEDATH and</td> <td>00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 cod 00 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check c 00402 btfss PIRI, TXIF ; check t 00403 btfss PIRI, TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00407 ; transmi 00409 ; write to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and</td> <td>00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 serialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT; check C 00402 btfss PIRI,TXIF ; check C 00403 btfss PIRI,TXIF ; check t 00405 coto \$-1 00405 return 00406 return 00407 poto \$-1 00407 poto \$-1 00</td> <td>00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 cotalTransmit: Bank0 ; change 00400 SerialTransmit: Bank0 ; change 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIRI,TXIF ; check t 00403 goto \$-1 00404 goto \$-1 00405 return 00406 return 00407 cotal movwf TXREG ; 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Transmit byte in W register from USART 00398 ; This routine returns in bank0 00309 cod 00 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check c 00402 btfss PIRI, TXIF ; check t 00403 btfss PIRI, TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00407 ; transmi 00409 ; write to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 serialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT; check C 00402 btfss PIRI,TXIF ; check C 00403 btfss PIRI,TXIF ; check t 00405 coto \$-1 00405 return 00406 return 00407 poto \$-1 00407 poto \$-1 00	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 cotalTransmit: Bank0 ; change 00400 SerialTransmit: Bank0 ; change 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIRI,TXIF ; check t 00403 goto \$-1 00404 goto \$-1 00405 return 00406 return 00407 cotal movwf TXREG ; transmi 00407 return 00408 ; return 00408 ; return 00408 ; return 00407 program memory 00400 ; Matre to a location in the flash program memory	00395 00396 ; Tansmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT; check C 00402 btfss PIR1,TXIF ; check t 00403 goto \$-1 00404 movwf TXREG ; transmi 00406 return 00406 return 00407 movwf TXREG ; transmi 00407 movwf transd ; transmi 00408 ; return 00408 ; return 00409 ; Write to a location in the flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIRI,TXIF ;check t 00404 goto \$-1 00405 return 00406 return 00407 00406 return 00407 00409 ;mrite to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401SerialTransmit: Bank000402btfsc <portb,cts_input;check c<="" td="">00403goto00403btfss<pir1,txif< td="">00404btfss<pir1,txif< td="">00405btfss<pir1,txif< td="">00406return00407return00407return00408return00409;Write to a location in the flash program memory00410;Mrite sin BEADRH and EEADR, data in EEDATH and</pir1,txif<></pir1,txif<></pir1,txif<></portb,cts_input;check>	00396 ;	003950039670039770039770039870039970039970039900400004018004029004039004049004059004060040700407004087004097004097004107004108999 <td>00395 00396 ;</td> <td>00395003967770039879003987100398710039871003991003991003991003991003991004001004010040200403100403100404100405110040611004071004081100409110040910040110040110040110040110040110040110040110040111004011004011004011004011004011004011004011004011004011004021004031004041004051004061<</td> <td>00395 00396 ;</td> <td>00395 00396 ;</td>	00395 00396 ;	00395003967770039879003987100398710039871003991003991003991003991003991004001004010040200403100403100404100405110040611004071004081100409110040910040110040110040110040110040110040110040110040111004011004011004011004011004011004011004011004011004011004021004031004041004051004061<	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT;check c00402btfss<pre>PIR1,TXIF00403goto00404\$-100405\$-100405movwf<pre>TXREG00406return00407return00409;mite to a location in the flash program memory00410;Mite to a location in the flash program memory</pre></pre></pre>	00396 ;	00395 ;rransmit byte in W register from USART 00397 ;fransmit byte in W register from USART 00398 ;fhis routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIRI,TXIF ;check t 00403 btfss PIRI,TXIF ;check t 00404 btfss PIRI,TXIF ;check t 00405 return 00406 return 00407 00406 return 00409 ;Write to a location in the flash program memory 00410 ;Address in EEADRH and EEADR, data in EEDATH and	00395 7. Transmit byte in W register from USART 00398 7. This routine returns in bank0 00399 00400 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT; check c 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00404 goto \$-1 00405 return 00406 return 00407 00408 ;	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIRL,TXIF ; check t 00403 btfss PIRL,TXIF ; check t 00405 transmi 00406 return 00406 return 00407 00407 ; movwf TXREG ; transmi 00407 00408 return 00407 inthe flash program memory 00410 ; Address in EEADRH and EEADR, data in EEDATH and	00395 00396 ;	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check C 00402 btfss PIRI, TXIF ; check t 00403 btfss PIRI, TXIF ; check t 00405 btfss PIRI, TXIF ; check t 00405 return 00406 return 00407 00409 ; mite to a location in the flash program memory 00410 ; Address in EBADRH and EEADR, data in EEDATH and
00397 ,Transmit byte in W register from USART 00398 ,This routine returns in bank0 00399 ,routine returns in bank0 00399 ,change 00400 SerialTransmit: Bank0 00401 btfsc <pre>porTb,CTS_INPUT 00402 btfsc<pre>porTb,CTS_INPUT 00403 btfss<pre>pIR1,TXIF 00403 btfss<pre>pIR1,TXIF 00404 goto 00405 return 00406 return 00407 return 00407 joto 00407 return 00407 jotatin Fransmi</pre></pre></pre></pre>	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00406 return ;check t 00406 return 00406 return 00407 00406 return 00407 00407 in PRADR1 data in FRDATH and	00396 ;	00395 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIR1,TXIF ; check C 00403 btfss PIR1,TXIF ; check t 00405 btfss PIR1,TXIF ; check t 00405 return 00406 return 00407 00408 jerrenter in the flash program memory 00410 ; Mrite to a location in the flash program memory	00395 00396 ;	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; check C 00402 btfss PIRL, TXIF ; check t 00403 goto \$-1 00405 transmi 00406 return 00406 return 00407 00407 00409 ; Write to a location in the flash program memory 00410 ; Madress in FRADRH and FRADR, data in FRDATH and	00395 00396 ;	00395
00397 ,Transmit byte in W register from USART 00398 ,This routine returns in bank0 00399 ,change 00399 ,change 00400 SerialTransmit: Bank0 00401 Butfsc PORTB,CTS_INPUT 00402 Butfsc PORTB,CTS_INPUT 00403 butfss PIRI,TXIF ,check c 00403 butfss PIRI,TXIF ,check t 00403 butfss PIRI,TXIF ,check t 00404 goto \$-1 ,transmi 00405 return ,transmi 00406 return ,transmi 00407 ,transmi ,transmi 00408 ,	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 poRTB,CTS_INPUT ;check C 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIR1,TXIF ;check t 00404 gotto \$-1 00405 return 00406 return 00407 00409 ;Write to a location in the flash program memory	00396 ;	00395 ;""""""""""""""""""""""""""""""""""""	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 . This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT ; change 00402 doto \$-1 00403 btfss PIRI, TXIF ; check t 00405 btfss PIRI, TXIF ; check t 00406 *-1 00406 return 00408 ; return 00409 jWrite to a location in the flash program memory	00395 00396 ;	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397Tansmit byte in W register from USART00398This routine returns in bank0003990040000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT;check C00402goto00403btfss<pre>PIR1,TXIF00404goto00405btfss<pre>prl1,TXIF00406return00407movwf00407return00407return00407return00407return00407return00407return00407return00407return00407return00407return00407return00407return00408return00409</pre></pre></pre>	00396 ;	00395;Transmit byte in W register from USART00397;Transmit byte in W register from USART00398;This routine returns in bank0003990040000400SerialTransmit: Bank000401btfsc PORTB,CTS_INPUT ;check c00402goto \$-100403btfss PIRI,TXIF00404goto \$-100405return00406return00407return00408return00409;mrite to a location in the flash program memory	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 btfsc PORTB, CTS_INPUT ; check c 00403 btfss PIRI, TXIF ; check t 00403 btfss PIRI, TXIF ; check t 00405 btfss PIRI, TXIF ; check t 00405 return 00406 return 00407 ; check n 00409 ; write to a location in the flash program memory	00395 00396 ; Tansmit byte in W register from USART 00398 ; This routine returns in bank0 00399 cod 00 SerialTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIRI,TXIF ; check t 00403 btfss PIRI,TXIF ; check t 00405 btfss PIRI,TXIF ; check t 00405 return 00406 return 00407 ; ransmi	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 cold 0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00401 btfss PIR1,TXIF ;check C 00403 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00406 cold 3 00406 return 00406 return 00407 cold 3 00407 cold 1 00407 cold 1 00407 return 00408 ;rransmi	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399;change 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIRI,TXIF ;check t 00403 btfss PIRI,TXIF ;check t 00404 goto \$-1 ;check t 00405 return 00405 return 00407 return 00407 00408 ;	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00402btfsc00403goto01403btfss00404goto00404btfss00405s-100405movwf00406return00407return00408return00409;write to a location in the flash program memory	00396 ;	003950039670039777003987003987003990039900399003090039900309003090040000401040104020403040304040404040404050406040704070408704087040970409704097040970409704097040970409704097040970409704017040977040977777777777777777777777777777777777777 <t< td=""><td>00395 00396 ;</td><td>00395 ;::::::::::::::::::::::::::::::::::::</td><td>00395 00396 ;</td><td>00395 00396 ;</td></t<>	00395 00396 ;	00395 ;::::::::::::::::::::::::::::::::::::	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 .00400 SerialTransmit: Bank0 ;change 00401 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00404 movwf TXREG ;transmi 00406 return 00408 ;	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT00402goto01403btfss<pre>PIR1,TXIF00404goto00405btfss<pre>prl1,TXIF00406return00407return00408return00409;Write to a location in the flash program memory</pre></pre></pre>	00396 ;	00395003960139770039770039870039970039901400004000040100402004020040300403004040040400405004050040600406004070040970040970040970040970040970040970040970040970040970040970040970040970040970040970040970040970040971040410 <t< td=""><td>00395 00396 ;</td><td>003950039677700398799</td></t<> <td>00395 00396 ;</td> <td>00395 </td>	00395 00396 ;	003950039677700398799	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank0003090040000401Btfsc00402Btfsc00403goto01403Btfss00404goto00405\$-100405\$-100406return00407return00409;return00409;write to a location in the flash program memory	00396 ;	00395 ;rransmit byte in W register from USART 00397 ;rransmit byte in W register from USART 00398 ;rhis routine returns in bank0 00399 schange 00309 schange 00400 SerialTransmit: Bank0 00401 btfsc <pre>ports,CTS_INPUT 00402 btfsc<pre>ports,CTS_INPUT 00403 btfss<pre>pit1,TXIF 00404 goto 00405 return 00406 return 00407 return 00408 return 00409 /Write to a location in the flash program memory</pre></pre></pre>	00395 00396 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 condent in bank0 00401 btfsc PORTB, CTS_INPUT ; check c 00402 btfss PIR1, TXIF ; check c 00403 btfss PIR1, TXIF ; check t 00405 condent goto \$-1 00405 return 00406 return 00407 vrite to a location in the flash program memory	00395 00396 ;	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00406 return 00406 return 00408 ;	00396 ;	00395 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ; check C 00402 btfss PIR1,TXIF ; check t 00403 btfss PIR1,TXIF ; check t 00405 return 00406 return 00406 return	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00401btfsc00402goto01403btfss00404goto01404btfss00405btfss01405return00405s-100406return00407return	00396 ;	00395 ;rransmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00399 00400 00399 ptfsc 00399 ptfsc 00399 ptfsc 00400 ptfsc 00401 ptfsc 00402 ptfss 00403 ptfss 00404 ptfss 00405 ptfss 00406 return 00407 return 00408 return	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 goto \$-1 00403 btfss PIR1,TXIF ;check t 00404 goto \$-1 00406 return 00406 return 00407 return	00396 ;	00395 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 00401 btfsc PORTB, CTS_INPUT ; check C 00403 btfss PIRI, TXIF ; check C 00404 goto \$-1 ; check t 00405 btfss PIRI, TXIF ; check t 00405 return 00406 return 00407 00408 ; return	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 .00400 SerialTransmit: Bank0 ;change 00401 SerialTransmit: Bank0 ;check C 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check t 00404 goto \$-1 ;transmi 00406 return 00408 ;	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIRI,TXIF ;check t 00403 goto \$-1 00405 transmi 00406 return 00407 (transmi	00396 ;	00395 ;;rransmit byte in W register from USART 00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 stalTransmit: Bank0 00400 SerialTransmit: Bank0 00401 btfsc <portb,cts_input< td=""> 00402 btfsc<portb,cts_input< td=""> 00403 btfss<pre>shIL,TXIF 00404 goto 00405 btfss<pre>shIL,TXIF 00406 s-1 00407 movwf<pre>TXREG 00408 return</pre></pre></pre></portb,cts_input<></portb,cts_input<>	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399;change 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIR1,TXIF ;check t 00405 movwf TXRG ;transmi 00407 return 00408	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00406 return 00406 return	00396 ;	00395 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00399 ; This routine returns in bank0 00399 = 00401 btfsc PORTB, CTS_INPUT ; check C 00401 btfss PIR1, TXIF ; check C 00403 btfss PIR1, TXIF ; check t 00405 btfss PIR1, TXIF ; check t 00405 return 00406 return 00408 :	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00406 return 00407 return	00396 ;	00395 ;:	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00403 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00405 return 00405 ;check t 00407 ;check t	00396 ;	00395 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00402stfsc00403btfsspoto\$-100404goto00405stfss00405stfss00406stfss00407return00407return	00396 ;	00395;	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397Transmit byte in W register from USART00398This routine returns in bank0003990039900400SerialTransmit: Bank000401btfsc <portb,cts_input< td="">00402goto<\$-1</portb,cts_input<>	00396 ;	00395;	00395 00396 ;	00395 :	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397Transmit byte in W register from USART00398This routine returns in bank000399.this routine returns in bank0003990040000401BerialTransmit: Bank000401btfsc <portb,cts_input< td="">00402goto01403btfss<pir1,txif< td="">00404goto00404movwf<txreg< td="">00405s-100405return00406return</txreg<></pir1,txif<></portb,cts_input<>	00396 ;	00395 ;::::::::::::::::::::::::::::::::::::	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIRL,TXIF ;check t 00403 btfss PIRL,TXIF ;check t 00404 movwf TXEG ;transmi	00396 ;	00395 ;	00395 00396 ;	00395 00395 ;::::::::::::::::::::::::::::::::::::	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check t 00403 goto \$-1 00405 tfss PIR1,TXIF ;check t 00406 return	00396 ;	00395 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00401btfsc00402goto01403btfss00404goto00405btfss00405\$-100406\$-100405movwf00406return00406return	00396 ;	00395 ;	00395 00396 ;	00395 ;	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00402btfsc00403btfsc00404goto00404goto00405\$-100405\$-100406return00406return	00396 ;	00395 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397Transmit byte in W register from USART00398This routine returns in bank0003990039900400SerialTransmit: Bank000401btfsc00401btfsc00402goto01403btfss00404goto00403btfss00404goto00404btfss00405btfss00404s-100405return00406return	00396 ;	00395;	00395 00396 ;	0039500396777787999 </td <td>00395 00396 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00399 00399 00391 ; This routine returns in bank0 00399 00400 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT 00402 00401 btfsc PORTB, CTS_INPUT 00401 btfss PIRI, TXIF ; check t 00402 00403 \$cliss ; check t 00403 00403 \$cliss ; check t 00404 00404 \$cliss ; check t 00405 btfss PIRI, TXIF ; check t 00405 \$cliss \$cliss ; check t 00406 \$cliss \$cliss ; transmi</td> <td>00395 </td>	00395 00396 ; Transmit byte in W register from USART 00397 ; Transmit byte in W register from USART 00398 ; This routine returns in bank0 00399 ; This routine returns in bank0 00399 00399 00391 ; This routine returns in bank0 00399 00400 00400 SerialTransmit: Bank0 00401 btfsc PORTB, CTS_INPUT 00402 00401 btfsc PORTB, CTS_INPUT 00401 btfss PIRI, TXIF ; check t 00402 00403 \$cliss ; check t 00403 00403 \$cliss ; check t 00404 00404 \$cliss ; check t 00405 btfss PIRI, TXIF ; check t 00405 \$cliss \$cliss ; check t 00406 \$cliss \$cliss ; transmi	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397Transmit byte in W register from USART00398This routine returns in bank000399;This routine returns in bank0003990040000400SerialTransmit: Bank000401btfsc00402btfsc00403goto01403btfss00404goto00403btfss00404movwf00404rtfss00405movwf00405return	00396 ;	00395;	00395 00396 ;	0039500396777787999 </td <td>00395 00396 ;</td> <td>00395 </td>	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc <pre>PORTB,CTS_INPUT00402goto00403btfss<pre>PIR1,TXIF00404goto00405\$-100405movwf<txreg< td="">00406return</txreg<></pre></pre>	00396 ;	00395 ;:	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00405 return	00396 ;	00395 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIRI,TXIF ;check t 00403 btfss PIRI,TXIF ;check t 00405 btfss PIRI,TXIF ;check t 00405 return	00396 ;	00395 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395 00396 00396 7 Transmit byte in W register from USART 00399 00399 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT;check C 00402 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00406 return
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00405 btfss PIR1,TXIF ;check t 00405 return	00396 ;	00395 ;""""""""""""""""""""""""""""""""""""	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00405 movwf TXRG ;transmi	00396 ;	00395 ;""""""""""""""""""""""""""""""""""""	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00401btfsc00402goto01403btfss00404goto00405\$-100405\$-100405movwf00405\$-100405movwf00405\$-1	00396 ;	00395;	00395 00396 ;	00395 00396; Transmit byte in W register from USART 00398; This routine returns in bank0 00399 00400 SerialTransmit: Bank0 00401 SerialTransmit: Bank0 00402 btfsc PORTB,CTS_INPUT; check C 00403 btfss PIRI,TXIF ;check t 00404 goto \$-1 00405 movwf TXRG ;transmi	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397;Transmit byte in W register from USART00398;This routine returns in bank000399;This routine returns in bank000400SerialTransmit: Bank000401btfsc00402btfsc00403btfsc00404goto00404goto00404goto00405%-100405%-100405movwf00405%-1	00396 ;	00395;::::::::::::::::::::::::::::::::::::	00395 00396 ;	00395 00396 ;	00395 00396 ;Transmit byte in W register from USART 00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00399 00399 00399 ;This routine returns in bank0 00399 00400 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT 00401 btfsc PORTB,CTS_INPUT 00401 btfsc PORTB,CTS_INPUT 00402 00401 goto \$-1 00403 00404 \$oto \$-1 00404 goto \$-1 ;check t 00405 movwf TXRG ;transmit	00395
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00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 :00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;change 00402 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00404 goto \$-1 00405 movwf TXREG ;transmi	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;This routine returns in bank0 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIRL,TXIF ;check t 00403 btfss PIRL,TXIF ;check t 00404 goto \$-1 00405 movwf TXREG ;transmi	00396 ;	00395 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 (00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIT1,TXIF ;check t 00404 btfss PIT1,TXIF ;check t 00404 goto \$-1 00404 ftfss PIT1,TXIF ;check t	00396 ;	00395 ;:	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 .00400 SerialTransmit: Bank0;change 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check t 00404	00396 ;	00395 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399	00397Transmit byte in W register from USART00398This routine returns in bank0003990039900400SerialTransmit: Bank000401btfsc <portb,cts_input< td="">00401btfsc<portb,cts_input< td="">00402goto<\$-1</portb,cts_input<></portb,cts_input<>	00396 ;	00395;	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395
00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ; 00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check t 00403 btfss PIR1,TXIF ;check t 00404 qoto \$-1	00397 ;Transmit byte in W register from USART 00398 ;This routine returns in bank0 00399 ;00400 SerialTransmit: Bank0 00401 btfsc PORTB,CTS_INPUT ;change 00401 btfsc PORTB,CTS_INPUT ;check C 00402 btfss PIR1,TXIF ;check t 00404 qoto \$-1	00396 ;	00395 ;	00395 00396 ;	00395 00396 ;	00395 00396 ;	00395 00395 /
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						00395 00396 00397 00398	0 0 0 3 8 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
						00395 00396 00397 00397	
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						00398 00396 00398 00397	00395 00396 00398 00398
						00395 00396 00397	00395 00395 00397
						00395003395003397	003950039500039500039500003950000395000039500003950000039500000000
						00395003950039600397000397	0039500397000397
						00395 00396	003950039500396
						00396	00396
		00396 ;	00396 ;	00395 ;	00396 ;	00395 ;	00395 00396 ;

Preliminary

	processor waits while reading;									XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
	dou	dou	return				END	'-' = Unused)		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXX			2	5		0 suppressed	24 suppressed
00441	00442	00443	00444	00445	00446 ;	00447	00448	MEMORY USAGE MAP ('X' = Used,			XXXXXXX XXXXXXXX	XXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X X	All other memory blocks unused.	Words Used: 227	Words Free: 7965	0	(I reported, 2
	1FFD 0000	1FFE 0000	1FFF 0008					MEMORY USAGE M	XXX : 0000	1F00 :		lf80 : XXXXXX lfC0 : XXXXXXX	2000 :	All other memo	Program Memory Words Used:	Program Memory Words Free:	Errors :	Warnings :	Messages .

APPENDIX B: HEX FILE FORMAT

MPASM generates an 8-bit Intel hex file (INHX8M) by default. The lines of this hex file all have the following format:

: BBAAAATTHHHH.... HHCC

A colon precedes each line and is followed by hexadecimal digits in ASCII format.

BB is a 2-digit hexadecimal byte count representing the number of data bytes that will appear on the line. This is a number from 0x00 to 0x10 and is always even because the PIC16F87X parts have a 14-bit wide memory and use two bytes for every program memory word.

AAAA is a 4-digit hexadecimal address representing the starting byte address of the data bytes that follow. To get the actual program memory word address, the byte address must be divided by two.

TT is a 2-digit hexadecimal record type that indicates the meaning of the data on the line. It is 0×00 for a regular data record and 0×01 for an end of file record. The boot code ignores all other record types.

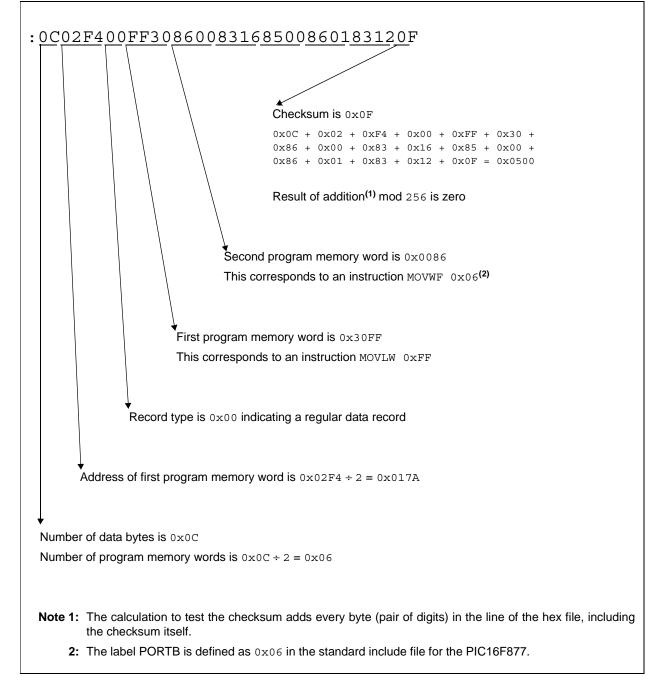
HH are 2-digit hexadecimal data bytes that correspond to addresses, incrementing sequentially from the starting address earlier in the line. These bytes come in low byte, high byte pairs, corresponding to each 14-bit program memory word.

cc is a 2-digit hexadecimal checksum byte, such that the sum of all bytes in the line including the checksum, is a multiple of 256. The initial colon is ignored. The code in Example B-1 will generate a line in a hex file as shown in Figure B-1.

EXAMPLE B-1: CODE TO GENERATE A HEX FILE

ORG	0x17A
movlw	0xFF
movwf	PORTB
bsf	STATUS, RPO
movwf	TRISA
clrf	TRISB
bcf	STATUS, RPO

FIGURE B-1: LINE OF HEX FILE



APPENDIX C: RS-232 HARDWARE HANDSHAKING SIGNALS

Understanding hardware flow control can be confusing, because of the terminology used and the slightly different way that handshaking is now implemented, compared to the original specification.

RS-232 hardware handshaking was specified in terms of communication between Data Terminal Equipment (DTE) and Data Communications Equipment (DCE). The DTE (e.g., computer terminal) was always faster than the DCE (e.g., modem) and could receive data without interruption. The hardware handshaking protocol required that the DTE would request to send data to the DCE (with the request to send RTS signal) and that the DCE would then indicate to the DTE that it was cleared to send data (with the clear to send CTS signal). Both RTS and CTS were, therefore, used to control data flow from the DTE to the DCE.

The Data Terminal Ready (DTR) signal was defined so that the DTE could indicate to the DCE that it was attached and ready to communicate. The Data Set Ready (DSR) signal was defined to enable the DCE to indicate to the DTE that it was attached and ready to communicate. These are higher level signals not generally used for byte by byte control of data flow, although they can be used for this purpose.

Most RS-232 connections use 9-pin DSUB connectors. A DTE uses a male connector and a DCE uses a female connector. The signal names are always in terms of the DTE, so the RTS pin on the female connector of the DCE is an input and is the RTS signal from the DTE.

DTE TO DCE CONNECTION

FIGURE C-1:

Over time, the clear distinction between the DTE and DCE has been lost. In many instances, two DTE devices are connected together. In other cases, the DCE device is able to send data at a rate that is too high for the DTE to receive continuously. In practice, the DTR output of the DTE has come to be used to control the flow of data to the DTE and now indicates that the DCE (or other DTE) may send data. It no longer indicates a request to send data to the DCE.

It is common for a DTE to be connected to another DTE (e.g., two computers), and in this case, they will both have male connectors and the cable between them will have two female connectors. This is known as a null modem cable. The cable is usually wired in such a way that each DTE looks like a DCE to the other DTE. To achieve this, the RTS output of one DTE is connected to the CTS input of the other DTE and vice versa. Each DTE device will use its RTS output to allow the other DTE device to transmit data and will check its CTS input to determine whether it is allowed to transmit data.

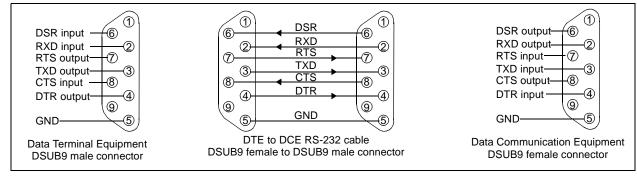
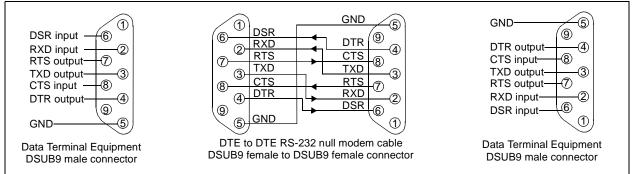


FIGURE C-2: DTE TO DTE CONNECTION



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