



# TECHNICAL INFORMATION BULLETIN

T/B No: TIBFM 15-01E  
Issue Date: DEC 14/09  
Rev. Date: JAN 24/18

**TiL Model:** TDFM-7000 transceivers with Type I or Type II modules  
**TiL P/N:** 051240-X/PXXXX  
**Affected S/No:** ALL

**Purpose:** TRANSCEIVER PROGRAMMING ORDERING GUIDE  
**Note:** Different cables and CPS software are required for Type I Modules versus units with Type II Modules as illustrated in Table 1 and Table 2 below.

**Parts Required:**

**TABLE 1**

<b>TDFM-7000 Transceivers with Type I Modules P/N: 051240-1, -2</b>		
<b>ITEM</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>
Software	RVN4182 (Motorola)	Motorola Astro Saber XTS-3000 CPS Software
Interface Box	RLN1015D (Motorola)	SmartRIB Interface Box
<sup>1</sup> AC Power Adapter	0180302E27 (Motorola)	SRIB AC Power Pack (110V)
<sup>1</sup> AC Power Adapter	2580373E86 (Motorola)	SRIB AC Power Pack (220V)
<sup>2</sup> Computer Interface Cable	3080390B49 (Motorola)	Computer (25-pin) to SmartRIB (9-pin)
<sup>2</sup> Computer Interface Cable	3080390B48 (Motorola)	Computer (9-pin) to SmartRIB (9-pin)
<sup>3</sup> SmartRIB/TDFM600/6000 Interface Cable	013524 (Technisonic)	SmartRIB connector (25-pin) to TDFM-7000(rear 25-pin) <b>See note below</b>
<sup>4</sup> KVL-3000 Key Loader Cable (required if encryption keys need to be loaded).	047381 (Technisonic)	KVL-3000 connector to TDFM7000 transceiver (rear 25-pin). <b>See note below</b>
<b>Optional front panel loading:</b> Download/Programming Cable. For use with Type I Modules.	037347 (Technisonic)	TDFM-7000 mini-DIN (front panel) to SRIB interface Box.
<b>Optional front panel loading:</b> KVL-3000 Key Loader Cable (required if encryption keys need to be loaded).	037348 (Technisonic) Replaces P/N:037352	TDFM 7000 mini-DIN (front panel) to the KVL-3000 Key Loader.

<sup>1</sup>Select appropriate SRIB to operate on 110V or 220V.

<sup>2</sup>Select appropriate cable with 9-pin or 25 pin computer interface as required.

<sup>3</sup>Can be purchased from Technisonic or fabricated as per Figure 2-3 of TiL document No. 01RE293F “Installation and Operating Manual”. For use with Transceivers with type I modules only.

<sup>4</sup>Must be purchased from Technisonic. Allows encryption keys to be loaded into the rear connector of the TDFM-7000 with a Motorola KVL-3000 Key Loader. Only required for transceivers with optional encryption capability. Can be used for Transceivers with Type I or Type II modules



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**TABLE 2**

<b>TDFM-7000 Transceivers with type II modules P/N: 051240-3, -4</b>		
The TDFM-7000 series transceivers that use Type II Modules do not require a Smart RIB box, AC power pack or computer RIB cable. Only <b>one</b> cable is required for programming using CPS Software. For PCs not equipped with RS232 Serial ports, the USB version of the cable should be used.		
ITEM	PART NUMBER	DESCRIPTION
<sup>1</sup> CPS Software	RVN4181 (Motorola)	Motorola Astro 25 Portable CPS Software
<sup>2,4</sup> USB CPS Programming Cable (Front Loading)	127507 PC7000 USB	CPS/Multi-TDP Programming Cable Unit front panel connector (Mini –DIN) to PC USB. <i>Note: No USB to serial adapter required</i>
<sup>2</sup> RS 232 CPS Programming Cable (Front Loading)	047365 Rev A or higher PC7000 II	CPS/Multi-TDP Programming Cable Unit front panel connector (Mini –DIN) to PC Serial Port (9-Pin)
<sup>2,4</sup> USB CPS Programming Cable (Rear Loading)	127506 PC6000 USB	CPS/Multi-TDP Programming Cable to rear connector (25-pin) to PC USB. <i>Note: No USB to serial adapter required</i>
<sup>2</sup> RS 232 CPS Programming Cable (Rear Loading)	047366 Rev A or higher PC 6000 II	CPS/Multi-TDP Programming Cable Unit rear connector (25 pin) to PC Serial Port (9-Pin)
<sup>3</sup> Key Loader Cable “KVL-3000 (Plus)” (Front loading)	037348	KVL-3000 (Plus) Key Loader Cable to front panel DIN connector of transceiver
<sup>3</sup> Key Loader Cable “KVL-3000 (Plus)” (Rear Loading)	047381	KVL-3000 (Plus) Key Loader Cable to rear 25 pin connector of transceiver

<sup>1</sup>**Motorola part:** These parts are not available for purchase from Technisonic

<sup>2</sup>**CPS Programming Cable:** Must be purchased from Technisonic. It cannot be fabricated due to circuits within the cable.

<sup>3</sup>**Key Loader Cable:** Must be purchased from Technisonic. Allows encryption keys to be loaded into the transceiver with KVL-3000 (Plus) Key Loader. Only required if the transceiver has been delivered with optional encryption capability.

<sup>4</sup>**USB Drivers** required for programming cables can be downloaded from <http://www.ftdichip.com/Drivers/VCP.htm>



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### **Programming Software:**

The Technisonic TDFM-7000 series transceivers require Motorola CPS (Customer Programming Software) to be programmed with memory location, operating frequency and other required information. This may include certain parameters for use in Motorola trunked radio systems.

- **Type I** transceiver modules can only be programmed via a PC with Motorola CPS software along with the Smart Radio Interface box (SRIB) and the applicable interconnect cables all listed in TABLE 1.
- **Type II** transceiver modules can only be programmed via a PC with Motorola CPS software however the Smart Radio Interface box (SRIB) is not used. Refer to TABLE 2 for the applicable interconnect cables and CPS software.

### **Motorola CPS:**

Motorola CPS (Customer Programming Software) is required for programming the individual channel parameters. The CPS software must be purchased online directly from Motorola (<https://businessonline.motorola.com/>) to comply with their software licensing regulations. Once on the website select “**Sign Up Now**” and follow the directions. To order Motorola products follow the procedures below:

- Select “**Buy Center**” in the menu bar and then select “**Search Catalog**”
- Type in the part number (select the latest revision for software)
- Fill in the quantity and add to the cart

### **Programming Procedures:**

- For further information regarding CPS Programming please refer to “**CPS Programming Quick Reference Guide**” (Document No. 04RE330), TIBFM 12-06, or TIBFM 15-02.