```pascal
  1: unit DataEntry_UHFMem;
  2:
  3: {$mode objfpc}{$H+}
  4:
  5: //============================================================================
  6: //
  7: //  DataEntry_UHFMEM.pas
  8: //
  9: //  Calls: AppConstants
 10: //         AppTypes
 11: //         AppVariables
 12: //         DataEntry
 13: //         Mem_UHF : LoadUHFStringGrid
 14: //         Utilities : GetToneIndexFromToneNr
 15: //
 16: //  Called By: DataEntry : TfrmDataEntry.FormActivate
 17: //                         TfrmDataEntry.bbtResetClick
 18: //                         TfrmDataEntry.bbtSaveClick
 19: //
 20: //  Ver: 1.0.0
 21: //
 22: //  Date: 11 Aug 2013
 23: //
 24: //============================================================================
 25:
 26: interface
 27:
 28: uses
 29:   Classes, Dialogs, SysUtils,
 30:   // Application Units
 31:   AppConstants, AppTypes, AppVariables, MEM_UHF, Utilities;
 32:
 33: procedure DataEntry_UHFMEM_Init;
 34: procedure DataEntry_UHFMEM_Save;
 35:
 36: implementation
 37:
 38: uses
 39:   DataEntry;
 40:
 41: //============================================================================
 42: procedure DataEntry_UHFMEM_Init;
 43:
 44: var
 45:   vbytToneNr : Byte;
 46:
 47: begin
 48:
 49:     frmDataEntry.Caption := frmDataEntry.cstrMemFormTitle;
 50:     frmDataEntry.edtSource.Text := Format('UHF%.2d',[frmDataEntry.vbytChannelNumber]);
 51:
 52:     //====================
 53:     // Set the RX Frequency
 54:     //====================
 55:
 56:     if Length(gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
 57:               gcbytRXFrequencyField]) > 0 then
 58:               frmDataEntry.edtRXFrequency.Text :=
 59:       Copy(gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
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 60:                gcbytRXFrequencyField], 3, 3) +
 61:            '.' +
 62:            Copy(gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
 63:              gcbytRXFrequencyField], 6, 3)
 64:          else
 65:            frmDataEntry.edtRXFrequency.Text := '';
 66:
 67:          //===========================
 68:          // Set the Band Radio buttons
 69:          //===========================
 70:
 71:          if gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
 72:                                        gcbytVFOField] = gcstrUHF then
 73:            frmDataEntry.rbtUHF.Checked := True
 74:          else
 75:            frmDataEntry.rbtVHF.Checked := True;
 76:
 77:          //===========================
 78:          // Set the Shift Radio buttons
 79:          //===========================
 80:
 81:          if gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
 82:                                        gcbytShiftField] = gcstrShiftPlus then
 83:            frmDataEntry.rbtPlus.Checked := True
 84:          else if gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
 85:                                        gcbytShiftField] = gcstrShiftMinus then
 86:            frmDataEntry.rbtMinus.Checked := True
 87:          else
 88:            frmDataEntry.rbtSimplex.Checked := True;
 89:
 90:          //===================================
 91:          // Set the Shift offset and calulate and Display the TX Frequency
 92:          //===================================
 93:
 94:           if Length(frmDataEntry.edtRXFrequency.Text) > 0 then
 95:           begin
 96:             frmDataEntry.edtTXFrequency.Text := frmDataEntry.CalculateTXFrequency;
 97:             frmDataEntry.SetShiftOffset;
 98:           end
 99:           else
100:             frmDataEntry.edtTXFrequency.Text := '';
101:
102:          //=======================================================
103:          // Set the Tone Checkboxes and Tone Frequency Combobox
104:          //=======================================================
105:          if gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
106:                                      gcbytToneField] = gcstrOn then
107:            frmDataEntry.rbtTone.Checked := True
108:          else if gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
109:                                      gcbytCTCSSField] = gcstrOn then
110:            frmDataEntry.rbtCTCSS.Checked := True
111:          else
112:            frmDataEntry.rbtNoTones.Checked := True;
113:
114:          //===========================================================
115:          // Determine the correct Index and set the Tone Freq Combobox
116:          //===========================================================
117:
118:          if gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
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119:                                               gcbytToneNrField] = '' then vbytToneNr := 1
120:          else vbytToneNr := StrToInt(gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
121:                                 gcbytToneNrField]);
122:          frmDataEntry.cbxTones.ItemIndex := GetToneIndexFromToneNr( vbytToneNr);
123:
124:          // Now Clear the Text field if there is no Tone function selected.
125:          if frmDataEntry.rbtNoTones.Checked then
126:            frmDataEntry.cbxTones.Text := '';
127:
128:          //=======================================
129:          //   Set the DTSS Checkbox and Code field
130:          //=======================================
131:          if gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
132:                                      gcbytDTSSField] = gcstrOn then
133:          begin
134:            frmDataEntry.chkDTSS.Checked := True;
135:            frmDataEntry.EnableDTSSCode;
136:          end
137:          else
138:          begin
139:            frmDataEntry.chkDTSS.Checked := False;
140:            frmDataEntry.DisableDTSSCode;
141:          end;
142:
143:          frmDataEntry.SetDTSSCode;
144:
145:          //====================
146:          // Set the Scan Checkbox
147:          //====================
148:
149:          if gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
150:                                      gcbytScanField] = gcstrOn then
151:            frmDataEntry.chkScan.Checked := True
152:          else
153:            frmDataEntry.chkScan.Checked := False;
154:
155:          //===============================
156:          // Set the RF Power Radio buttons
157:          //===============================
158:
159:          if gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
160:                                      gcbytRFPowerField] = gcstrRFPowerLow then
161:            frmDataEntry.rbtRFPowerLow.Checked := True
162:          else if gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
163:                                      gcbytShiftField] = gcstrRFPowerMedium then
164:            frmDataEntry.rbtRFPowerMedium.Checked := True
165:          else
166:            frmDataEntry.rbtRFPowerHigh.Checked := True;
167:
168:          //====================
169:          // Set the Channel Name
170:          //====================
171:
172:          frmDataEntry.edtChannelName.Text := gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
173:                                      gcbytChannelNameField];
174:
175:          //================
176:          // Set the Comments
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177:     //=================
178:
179:     frmDataEntry.edtComments.Text := gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
180:                                     gcbytCommentsField];
181:
182: end;// procedure DataEntry_UHFMEM_Init
183:
184: //================================================================================
185: procedure DataEntry_UHFMEM_Save;
186:
187: var
188:   vstrTStr : string;
189:
190: begin
191:
192:     //======================================================================
193:     // We populate the Favourite Array using the Favourite Button number
194:     // as the primary key and the Field number as the sceondary key.
195:     //======================================================================
196:
197:     // VFO/Band
198:     if frmdataEntry.rbtUHF.Checked then
199:       gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytVFOField] := gcstrUHF
200:     else
201:       gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytVFOField] := gcstrVHF;
202:
203:     // RX Frequency
204:     vstrTStr := '00' +
205:                 Copy(frmDataEntry.edtRXFrequency.Text,1,3) +
206:                 Copy(frmDataEntry.edtRXFrequency.Text,5,3) +
207:                 '000';
208:     gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytRXFrequencyField] :=
209:       vstrTStr;
210:
211:     // Step Size
212:     if frmdataEntry.rbtUHF.Checked then
213:       gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytStepField] :=
214:         gcstrUHFStep
215:     else
216:       gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytStepField] :=
217:         gcstrVHFStep;
218:
219:     // Shift Indicator
220:     if frmDataEntry.rbtSimplex.Checked then
221:       gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytShiftField] :=
222:         gcstrShiftSimplex
223:     else if frmDataEntry.rbtPlus.Checked then
224:       gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytShiftField] :=
225:         gcstrShiftPlus
226:     else
227:       gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytShiftField] :=
228:         gcstrShiftMinus;
229:
230:     // Reverse switch
231:     // It is not configurable. It may only be toggled by the GUI button
232:     // so we default it to Off
233:     gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytReverseField] :=
234:       gcstrOff;
235:
```

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236:    // Tone and CTCSS switch
237:    // Although there are two data fields, they are mutually exclusive so we handle
238:    // them together. They may both be Off, but only one of them may be on at a time
239:    if frmDataEntry.rbtNoTones.checked then
240:    begin
241:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytToneField] :=
242:        gcstrOff;
243:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytCTCSSField] :=
244:        gcstrOff;
245:    end
246:    else if frmDataEntry.rbtTone.checked then
247:    begin
248:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytToneField] :=
249:        gcstrOn;
250:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytCTCSSField] :=
251:        gcstrOff;
252:    end
253:    else
254:    begin
255:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytToneField] :=
256:        gcstrOff;
257:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytCTCSSField] :=
258:        gcstrOn;
259:    end;// if frmDataEntry.rbtNoTones.checked
260:
261:    // DTSS switch
262:    if frmDataEntry.chkDTSS.checked then
263:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytDTSSField] :=
264:        gcstrOn
265:    else
266:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytDTSSField] :=
267:        gcstrOff;
268:
269:    // Tone Number
270:    if frmDataEntry.rbtTone.checked then
271:    begin
272:      vstrTStr := IntToStr(GetToneNrFromIndex(frmDataEntry.cbxTones.ItemIndex));
273:      if StrToInt(vstrTStr) > 10 then
274:        gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytToneNrField] := vstrTStr
275:      else
276:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytToneNrField] := '0' +
277:                                               vstrTStr;
278:    end
279:    else
280:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytToneNrField] := '01';
281:
282:       // DTSS Code
283:    if frmDataEntry.chkDTSS.checked then
284:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytDTSSCodeField] :=
285:        frmDataEntry.edtDTSSCode.Text
286:    else
287:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytDTSSCodeField] := '000';
288:
289:    // CTCSS Nr
290:    if frmDataEntry.rbtCTCSS.checked then
291:    begin
292:      vstrTStr := IntToStr(GetToneNrFromIndex(frmDataEntry.cbxTones.ItemIndex));
293:      if StrToInt(vstrTStr) > 10 then
294:        gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytCTCSSNrField] := vstrTStr
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295:        else
296:          gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytCTCSSNrField] := '0' +
297:                                                    vstrTStr;
298:      end
299:      else
300:        gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytCTCSSNrField] := '01';
301:
302:    // Shift Offset
303:    if frmDataEntry.rbtSimplex.checked then
304:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
305:                            gcbytShiftOffsetField] := '000000000'
306:    else
307:    begin
308:      if frmDataEntry.rbtVHF.Checked then
309:        gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
310:                            gcbytShiftOffsetField] := '000600000'
311:      else
312:        gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber,
313:                            gcbytShiftOffsetField] := '005000000';
314:    end;// if frmDataEntry.rbtSimplex.checked
315:
316:    // Scan switch
317:    if frmdataEntry.chkScan.Checked then
318:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytScanField] := gcstrOn
319:    else
320:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytScanField] := gcstrOff;
321:
322:    // RF Power
323:    if frmDataEntry.rbtRFPowerLow.Checked then
324:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytRFPowerField] :=
325:        gcstrRFPowerLow
326:    else if frmDataEntry.rbtRFPowerMedium.Checked then
327:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytRFPowerField] :=
328:        gcstrRFPowerMedium
329:    else
330:      gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytRFPowerField] :=
331:        gcstrRFPowerHigh;
332:
333:    // Now we save the Channel Name
334:    gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytChannelNameField] :=
335:      frmDataEntry.edtChannelName.Text;
336:
337:     // Now the Comments
338:     gvstrUHFChannelDataArray[frmDataEntry.vbytChannelNumber, gcbytCommentsField] :=
339:       frmDataEntry.edtComments.Text;
340:
341: //   DisplayDataArray(drtUHFMEM, frmDataEntry.vbytChannelNumber);
342:     LoadUHFStringGrid;
343:
344: end;// procedure DataEntry_UHFMEM_Save;
345:
346: //=============================================================================
347:
348: end.// unit DataEntry_UHFMem;
349:
```